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1929

# AMAZING STORIES QUARTERLY



*Stories by*  
**Stanton A. Coblentz**  
**Edmond Hamilton**



EXPERIMENTER PUBLISHING CO. NEW YORK N.Y.



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# AMAZING STORIES QUARTERLY

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### OUR COVER

this issue represents a scene from the story entitled, "12,000 Years" by Stanton A. Coblentz, showing the commanders leading their army of ants to battle against their enemy, the A-urians, over the important matter of climate.

April 20th, 1929

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# AMAZING STORIES QUARTERLY

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Editorial and General Offices: 230 Fifth Avenue, New York, N. Y.

## The Amazing Value of Scientifiction By J. Roy Chapman

**T**HE far-reaching value of scientific fiction is truly amazing. Among the many types of stories which hold the attention of the reading public it stands preëminent in its combined qualities of entertainment and enlightenment. No other form of literature can compare with it in constructive importance.

Let us consider briefly the principal benefits of Scientifiction.

The strange facts and theories contained in these stories cannot fail to impress deeply persons who appreciate the marvels and mysteries of science. These readers find Scientifiction an exceptionally delightful medium for keeping in constant touch with this fascinating subject.

The fact that such fiction is informative and helpful detracts nothing from its interest to readers who seek only thrills and amusement. Adventure, travel and excitement are developed to the highest degree. The possibilities for intense action, bizarre situations and strange characters are unlimited. The vivid entertainment value of these stories renders the acquirement of scientific knowledge a pleasant and unconscious pastime.

Scientifiction possesses the invaluable characteristic of causing its readers to enjoy thinking. The facts and fancies included in such stories have the commendable property of creating a desire for further knowledge. In truth, so captivating is this type of literature that readers are sometimes impelled to adopt various branches of science as lifetime professions. The stories become potential benefactors of mankind.

As a preventive of mind-stagnation, this sort of fiction is extremely beneficial. Though most stories are read

and quickly forgotten, scientific fiction clings to the mind and stimulates thought. It is healthy thinking. Ideas are approached and considered from new viewpoints. Theories and truths are compared, and the mind is gainfully employed in the contemplation of vast and important problems.

Its enormous value to men of science cannot be overrated. The familiar example of the submarine, which owes its inception to Jules Verne's immortal story, "Twenty Thousand Leagues Under the Sea," is only one instance among many. This type of literature has been responsible for a large number of the wonders we see all about us. What marvels are yet to come! Many ideas in our scientific stories of today are dormant nuclei of future inventions and discoveries of colossal importance.

The benefits resulting from the practical development of Scientifiction theories not only assist tremendously the progress of mankind, but they serve also in making our world a better place in which to live. Science is steadily solving the many problems of existence, and scientific fiction is playing a leading part in the drama of development.

Until recently, not many such stories had been written; yet even those few have exerted a vast influence upon the creations and discoveries of science. Now, with the number of Scientifiction stories continually increasing and becoming more and more popular, we are at the threshold of a new and unprecedented era of progress.

A stupendous increase of scientific advancement is inevitable in the very near future.

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*See page 284*

The Next Issue of the Quarterly Will Be on the Newsstands July 20th

# AFTER 12,000 YEARS

By Stanton A. Coblenz

Author of: "The Sunken World" and "The Gas-Weed."

## CHAPTER I

### The Survival Drug



T was on an ill-starred day that I beheld Montrose's advertisement. If I had not been out of work and miserable; if I had not fallen into a deep despondency and a morbid hatred of living; most of all, if I had not

quarreled with my wife and let blind anger blind me, I should never have needed Montrose nor launched upon that grim course from which there was no returning. Even so, I did not know what I was undertaking; I did not anticipate that I was to see that which no other member of my generation could see, and do that which no other member of my generation could do, and be hurled into a career more harrowing and fantastic than any nightmare or terrifying dream.

Yet the fateful advertisement gave no more than a hint of the events that were in store: "Wanted: able-bodied man to assist in scientific experiment. No experience required. Some slight risk involved. Only those not afraid of the unusual need apply. Apartment 13 A, 1226 Madison Ave."

How vividly I remember every word! And how arrestingly the succinct phrases took hold of my imagination! "Kitty, here is just the job for me," I called out to my wife across the narrow reaches of our basement sitting-room. Yet she did not stir nor make any reply, but sulked red-eyed on the faded sofa, staring up at the birdless bird-cage, as though it held some supreme and mysterious fascination.

Slowly and emphatically I read her the advertisement. But she gave no sign of having heeded. "You said I could not do a man's work," I reminded her, still smarting beneath a recent taunt. "We shall see! Here is a task

involving peril—just what I am looking for!" It seemed to me that the swollen eyelids trembled just a little, and that the thin frail fingers fluttered; but about the lips there was a noticeable hardening, and no words came forth.

"Then I shall apply at once!" I decided, stung by her silence no less than by the remembrance of her angry words. And a minute later, armed with hat and raveled coat, I had slammed the door and gone striding forth into the street.

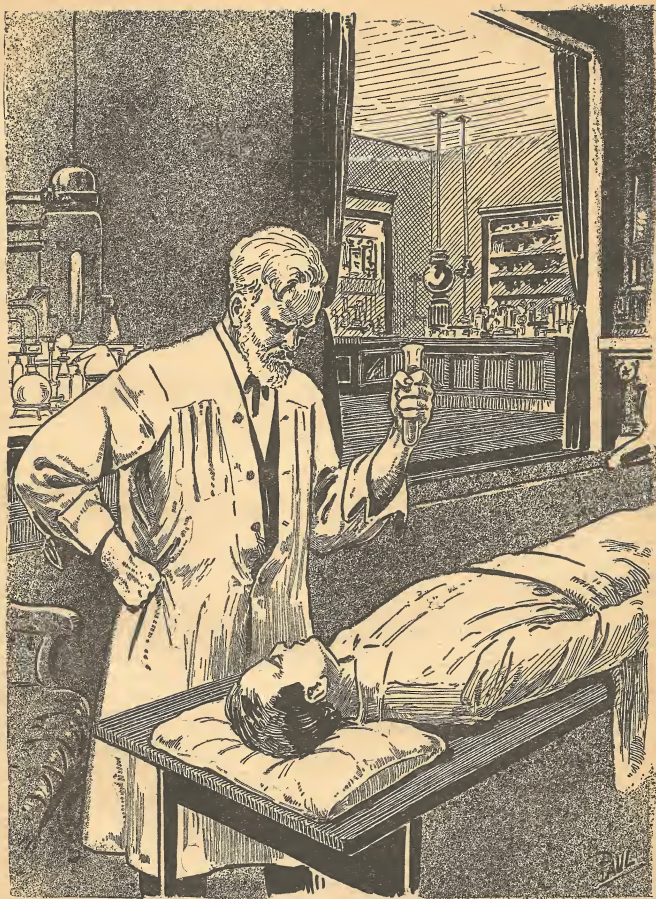
**W**HAT will our world be like 12000 years from now? Judging by the strides that we are now making in the fields of science and mechanics, it is well nigh impossible to foretell what the world will be like even 1200 years hence. The standardizing of life which seems to be going on apace now—for business efficiency and military prowess—would seem to indicate an age of the highest sort of specialized development. Should we examine more closely the idea of specialization in various fields of endeavor, we might discern a striking similarity between our organization and—according to eminent authorities on the subject—the highly organized development of the ants, for instance. Do we not seem to be working toward an extremely specialized organization?

Mr. Coblenz, author of "The Sunken World," seems to have a genius for showing us up to ourselves, in a most casual and incidental manner. You sometimes wonder whether he is conscious of poking fun at us, all the time quietly laughing to himself, or whether he is drawing a true picture, showing us shorn of all trimmings, such as rationalizations and our high-sounding ideals, without himself realizing that he is doing it.

If we were suddenly projected into the year 13,929, what should we be likely to find? It is always interesting to allow our imaginations to roam into the distant future. Our well-known author allows his imagination free reign, though he adheres pretty strictly to scientific facts, and builds on modern tendencies. He gives us his ideas in a realistic and subtly satirical manner, which makes this story even more absorbingly interesting than "The Sunken World."

**I** FEAR that the door-man peered at me a little suspiciously as I slouched into the elegant lobby of the apartment house at 1226 Madison Avenue; and I know that the elevator boy stared questioningly at the wild-eyed figure with the dishevelled hair and patched garments who inquired dubiously for Apartment 13 A. Yet he did not refuse, as I had half expected, to take me to my destination; and, upon arriving, I found that I had been preceded by no less than a score of individuals as poorly clad and as disreputable-looking as myself. I was familiar, far too familiar, with the type, for had I not encountered it often enough in my rounds of the employment agencies? Did I not feel at home among these shaggy and unshaven men, with their seamed faces and listless eyes, their tobacco-stained hands, their perpetual yellow flannel shirts, their huge boots and baggy trousers? Yet, seeing how many had preceded me, I was indeed far from disheartened, for what chance had I when so many applied?

Some perverse instinct, Reflecting how incongruous these rude toilers looked in the damasked and tapestried drawing-room, I took my place in their midst; and there I lounged while the interminable minutes dragged by and from time to time a maid appeared from



Evidently the project that occupied him now was particularly absorbing....At times I could still hear him muttering to himself, though in tones of increasing satisfaction....I could distinguish a clear whirring sound as of a gas-burner....while such a blending of curious odors assailed me that it was impossible to describe, or even to recollect them.

an inner room and escorted one of my companions out.

Evidently our prospective employer was an exacting individual, for those who were summoned were never more than two or three minutes in returning. And usually it was with a black scowl that they reappeared, and sometimes with an ill-suppressed oath. "Must think we're all crazy!" was the muttered comment of one particularly irate applicant; while I heard another exclaiming, in tones so loud as to be audible from the adjoining room, "What do you take me for, anyway? A dog—or a guinea pig?"

And it was not ten seconds before the author of these words came stamping out like one who has seen outrageous things.

I must confess that all my vaunted boldness had left me long before my turn arrived. As my companions one by one vanished from my side, and as the score was reduced to ten, and then to five, and then to three, and then to two, I began to ask myself whether there were not something queer, even sinister, about the advertisement and the advertiser. And within me there seemed to sound a warning voice—could it have been the voice of the future?—urging me to flee, to flee while there still was time and the unknown peril was yet to strike.

But some strange fascination held me in my chair with an attraction that was almost uncanny. And still the minutes went round, until but one companion sat at my side. Soon that one was gone, and then, with a wavering heart, I saw the maid beckon to me, and hesitantly I stepped into the room beyond.

A gaunt, bespectacled individual of about fifty-five or sixty, whom the servant addressed as "Professor Montrose," was bending over some papers strewn pell-mell on a great mahogany desk. At first he appeared scarcely aware of my entrance, but after a second or two he looked up with a scowl, motioned me to a seat, and sat staring at me with tiny piercing gray eyes, that seemed to search me to the depths.

Disconcerted, I avoided his gaze, and had a momentary glimpse of great stacks of books reaching to the ceiling and of a glass case containing microscopes. But he put an abrupt end to such observations by demanding, in a rapid, nervous tone that reminded me of a college lecturer interrogating his class:

"Let us begin, sir, without formalities. Do you come here prepared for the unusual?"

"I—yes, I believe so," I gasped, while he leaned far forward with a deepening scowl, and flung his second question:

"And are you prepared to take risks for the sake of science?"

"Why, yes—that is, of course, if you make it worth my while," I managed to blurt out, wondering in what way I could be of aid to science.

Ignoring the latter half of my reply, he continued, in a more business-like manner, "The proposition, sir, is simply this: I am conducting an investigation which is likely to prove epoch-making. Thus far I have confined my experiments to the four-footed kingdom, but the time has arrived when it is essential to have a human subject for the more vital tests. Consequently I have advertised in order to find a suitable man who will consent—"

"Then I fear you have the wrong party!" I cut him short, rising abruptly and reaching for my hat, while through my mind darted visions of slashing knives and bandaged limbs. "If you want some one to vivisect, you'll have to look elsewhere!"

And I swung indignantly toward the door, filled with an urgent desire to be elsewhere.

.. "Just a moment, please!"

THE words were so commanding that I turned back despite myself.

"If you will do me the honor to hear me to the end, you will find that I have no desire to vivisect you," continued Montrose. And in his eyes was an ironic glitter, mingled, I thought, with just the hint of an eager appeal. "My experiment would subject you to no pain, although perhaps to some little inconvenience—that is all. But I am sure that you would be compensated adequately."

"What is it all about, then?" I asked, somewhat mollified.

The professor adjusted his tortoise-shell spectacles, thoughtfully stroked his lean, close-shaven chin, and sat regarding me fixedly for several seconds before he resumed:

"My field of research, sir, is not physical, but psychic. That volume there"—he designated an imposing, somber-looking tome entitled *Subliminal Consciousness*—"will indicate where my major interests lie. For more than twenty-five years I have been laboring to perfect a device which will solve once and for all the enigma of the human personality and the mystery of its survival after death. Now, after innumerable discouragements and failures, I believe I have succeeded. Indeed, I know I have succeeded. Only one more step need be taken before the fruits of this unexampled research are given to the world."

The speaker's eyes appeared to enlarge enormously as he spoke, and to fairly burn and sparkle with the eagerness of his discovery. And the thin scholarly face seemed illuminated and transfigured with a light that was almost prophetic.

"I have discovered a formula which will triumph over the greatest foe of our race. Now we may all cry out with the poet, 'O grave, where is your victory? O death, where is your sting?' For I have learned to read the secret of death. No, do not misinterpret me"—he raised his hand in a disarming gesture as he noted my incredulous smile—"I am not a spiritualist. I proceed strictly by scientific methods. My formula has already succeeded experimentally—so far as the lower animals are concerned. By means of what we may call the 'Survival Drug,' I have produced in dogs and rabbits a state of death which, while enduring for any desired length of time, is only temporary in nature; upon the application of a second chemical, it is followed by a complete resumption of all the faculties. The one flaw in the investigation, of course, is that the creatures experimented with have not been able to report their experiences. But if the drug were to be administered to a man—"

"Oh, now I see!" I exclaimed, once more reaching for my hat. "So you should like me to die—and then be brought back to life!"

"You put matters quite succinctly," stated Montrose, with a solemn smile.

"Then let me tell you quite succinctly, you will have to look elsewhere!" I flung back, convinced that the man was mentally deranged. Once more I started toward the door.

But for some inexplicable reason the professor seemed to covet me as a victim. "Wait till you have heard all!" he exclaimed again, in a voice of command that I could not resist. "While there is indeed some risk, it is inconsiderable. I have experimented already with scores of animals; and out of fifty-nine attempts I have brought fifty-nine creatures fully back to life. There is no reason to believe that a human being would be otherwise affected, for, as you know, the history of all experimentation shows that man and beast behave similarly under similar conditions. All I would re-

quire would be two or three days of your time, and for that, I presume"—he hesitated perceptibly—"a remuneration of five hundred dollars would not be unwelcome."

Five hundred dollars! And for two or three days' work! Memories of a musty basement room, memories of unpaid bills, memories of an empty bread-box, went flashing through my mind; and as I stared down at my unpolished shoes, and noted again how there was a hole the size of a penny above one of the big toes, a sore temptation beset me, and I had not the strength to utter the refusal I was on the point of speaking.

"Of course, you need not decide at once," explained the professor, with a bland smile. "Think it over, and come back to-morrow at ten."

And he turned again to his pile of papers, while I hastened from the room with a sense of indefinite relief.

For some unaccountable reason, it was almost as if I had escaped the presence of something uncanny and sinister. No doubt my alarm was wholly unreasonable; yet more and more, as I strode away through the sleety streets, the impression grew upon me that there was either something diabolical about Professor Montrose, or else that he could not be quite in his right mind. And though his golden offer still allured me, and though the thought of my wife's unjust accusations goaded me to accept it, yet by the time I had reached home, I had half decided upon a refusal.

But I had reckoned without thought of what awaited me. As I came hanging in at what I jocosely called the "Front Door"—it being, of course, the only door to our apartment—I was confronted by the vision of my wife, with eyes redder and even more swollen than before. "The landlord has been here—again," were the words with which she greeted me—words which I heard in silence, while slowly and deliberately I pulled off my coat and deposited it on the one-armed arm-chair.

"Oh, Henry, you don't seem to care at all," she complained, in a thin, wailing voice. "Heaven knows what's to become of us. He gives us only—! next Thursday."

**H**ASTILY I made a computation. "That leaves us just six days," I remarked, as though the landlord's threat were the most unimportant thing on earth. "What would you say if, before next Thursday, I brought you five hundred dollars?"

"Five hundred fiddlesticks!" The thin lips curled in a sneer, the haggard white features were lighted by a wan smile. "When you bring me five hundred dollars all at once, Henry, we'll be able to pick up gold in the street!"

Had I not heard such taunts by the hundred already, I should no doubt have flown into a rage. But ever since my business partner had defrauded me the first year of our marriage, and I had been hurled into a hand-to-hand conflict with famine, I had listened to such accusations with regularity. Consequently, though smarting beneath my wife's words, I pretended not to have heard, but persisted, with renewed determination, "Believe it or not, Kitty, by next Thursday I'll get you five hundred dollars!"

A look almost of fear flitted across the worn face, and mockery gave place to pleading. "But please, Henry, promise you won't do anything wrong!" she begged. "Please! We've had trouble enough already without—"

My reply proved wholly disconcerting. For the first time in many days I burst into hearty laughter. Then emphatically I assured my wife that I intended to do nothing that would antagonize the police.

Thoroughly puzzled, she asked me to explain. But I had the advantage, and did not intend to lose it. Preserving an air of mystery, I merely confided, "To-morrow morning I will go away and may not return for several days. But when I do come back, I will have money for the landlord. I will give you the address of my employer, but you must not try to communicate with me unless I am absent more than three or four days."

"But why?" she inquired suspiciously, and not a little angrily. "Why? I never heard of such a thing in all my life!"

I maintained a stubborn silence.

"But why? Can't you tell me why?" she insisted, with shrill determination.

But still I heard her in silence.

And still she stormed and raved; and all the old, worn accusations and reproaches, coupled with reproaches and accusations that were wholly new, came forth in a fluent stream. Yet I steeled myself against them; for once, her pleas were without avail; for once, even her tears failed of effect; I promised to explain the mystery only after my return with the five hundred dollars.

Now I looked forward almost thankfully to the chance which Professor Montrose had offered, for my mysterious absence would present a subtle opportunity to revenge myself for the gibes and insults of many days.

But had I known how thorough-going my vengeance was to be, I should have hesitated long before paying a second visit to Professor Montrose.

## CHAPTER II

### Dead or Alive?

**I** WAS never a believer in premonitions, and even now I maintain that what I felt as I slowly took my way to Professor Montrose's was but the reflection of my own fears. Yet I did distinctly experience a sense of peril, a sense of peril acute and imminent; it was as if some invisible guardian hovered about me, crying with a voice that I could hear only with an inner ear, "Take care! Take care! Turn back, Henry Merwin, while there is yet time!"

And on several occasions I actually did turn back, once going so far as to stroll thrice around the same block before resuming the direct route. It was no light matter, I told myself, to be condemned to die even temporarily—how be sure that one's decease would not be permanent? Now that the actual ordeal loomed near, I began to quail and to tremble in every limb, like one who goes reluctantly to a serious and perhaps fatal surgical operation; and only the thought of a steel-grated basement room, only the resemblance of a red-eyed, snoring face and of a rasping, querulous voice, gave me the courage to keep my appointment.

Owing to my aimless meanderings through the streets, I arrived at least an hour late, perhaps secretly hopeful that my tardiness would urge the professor to engage another in my place—but no! He did not seem aware of my delay, but greeted me in the most matter-of-fact and abstracted manner, mechanically bade me be seated, and then seemed to forget me entirely while he pored over some papers on which mathematical symbols were scrawled in a minute hand.

In the interval of waiting—an interval during which I clutched and fumbled nervously at my hat and fidgeted like a repressed child—I had an opportunity to survey the professor's study much more carefully than before. I took particular note of a little case in the corner, filled with a variety of little vials and bottles; I observed that most of them were marked with undecipherable polysyllabic labels and with the sign of the skull

and crossbones. At the same time, I peered with casual interest at the great tomes that littered the room, but the sight of them was not encouraging; they were all of a medical or psychological nature; a few of the titles, which I chance to recall, were "Anaesthesia and Death," "The Pathology of Drug Poisoning," "Cerebro-Spinal Experimentation," and "The Induction of Artificial Paralysis." Had Montrose deliberately calculated on increasing my impatience to a harrowing anxiety, he could not have done better than to let me sit there silently surveying those ominous gray volumes.

It was fully half an hour before the professor became conscious again of my existence. Then, looking up with a placid smile, as though unaware of the torments I had been enduring, he stared at me for an appraising second, and declared, "Well now, sir, let's be getting down to business. I'm glad to see you've come, though I thought you would. So you're prepared to go through with the work—at once?"

"At once!" I affirmed, and mentally added, "The sooner the better!"

"Your part will be simple," the professor explained, his furrowed features drawn up into a frown. "The action of the drug will be almost instantaneous; your heart will cease to beat, your lungs to absorb air—you will show every physical manifestation of dissolution. Possibly you will be unconscious; possibly your experience will be that of a newly incarnate soul. That is what I wish you to observe: should you have any definite remembrances, I want you to note them down for me in detail as soon as possible after your revival. Do you think you can?"

"Don't see why not," I mumbled.

"Good!" approved the professor, smiling at me as genially as a gourmand at the roast he is about to devour. "I'm glad you decided—you seemed the most likely of all the applicants."

He paused momentarily, then, resuming a professional gravity, continued, "And now for the physical examination. Heart in good condition, I presume? Would you mind stripping to the waist?" Whereat, in a business-like manner, he opened a leather case and drew forth a stethoscope, while numbly and mechanically, still gripped by an obsessing fear, I obeyed his directions.

The results of the examination did not seem altogether pleasing to him. He scowled prodigiously as he passed the instrument over various parts of my anatomy, each time with the injunction, "Take a long breath. No, a little longer, please. Now exhale." And, having completed the investigation, he still scowled, as though in doubt, and inquired:

"Ever have any heart palpitations?"

I replied in the negative.

"Any serious illness of any kind?"

"None—except poverty."

"This is no time to be facetious," he reprimanded, with no relaxing of his demeanor. "Parents living? No? How old were they when they died?"

"My father was seventy-one; my mother, fifty-three—killed in an auto wreck."

"H'm. Very good," he approved, absently. "Any brothers or sisters?"

"Two brothers."

"Both alive?"

"Yes—but they're married."

He seemed not to have heard my last remark.

"I believe you will do," he grunted, with an abstracted smile. And then slowly, as if debating some grave matter with himself, "There are indeed indications of some slight cardiac derangement, though of nothing at all serious. Not serious enough, at least, to affect our experiment. But it might be advisable for you to consult a specialist later."

A new fear clutched at my heart. What if I were unable to stand the drug, and—

But my reflections were abruptly cut short. "This way, please," directed the professor, flinging open the door to a small adjoining room. And I gaped to find myself in the presence of an operating-table and a glass case filled with surgical instruments.

"YOU will attire yourself in this robe," my employer ordered, thrusting a white linen gown into my hands. "I shall be back in just a moment."

The door closed softly behind me; and, with something of the sensations of a convict newly donning his prison clothes, I mechanically made the change of apparel. As I did so, I wondered how long it would be before I was clad again in the discarded garments. And as my eyes fell upon the sharp scalpels and knives, all immaculately polished, and upon the evil-looking pincer-like instruments that filled the case before me, I had a sudden impulse to resign from the professor's employ.

Yet what matter if I remained? What matter even if my worst fears were realized? What value, after all, did my life have? Once more the thought of two cold familiar eyes and a harsh familiar voice came to my mind; and, at that vision, I gritted my teeth, and, though trembling just a little, arrayed myself without hesitation in the white linen robe.

Luckily, I had not long to wait for Montrose's return. But that which he held in his hand did not reassure me. It was a little bottle containing perhaps an ounce of some inky fluid; and upon its surface, in portentous red and black, glared the sign of the skull and crossbones.

"Kindly place yourself here," requested the professor, indicating the operating-table. And without a word I lifted myself to a sitting posture, while ceremoniously he emptied the contents of his inky bottle into half a glass of water.

Instantly a strange and nauseating odor filled the room. Indescribably repulsive, it was unlike anything I had ever experienced before; it can best be compared to the stench which might arise from a drug store when an earthquake had shattered the windows and broken many bottles. But the professor seemed scarcely to notice the disgusting smell; in his eyes, I thought, was a weird, evil gleam; and it was with something of a fiendish relish that he surveyed his sooty decoction. But it is possible that I merely imagined this; it is possible, also, that fear had slightly unbalanced my mind when I conceived of him as a sorcerer brewing some devilish brew; yet there is no question that he smiled with grim satisfaction as he approached me with the evil liquid, and that I shrank back in terror when he commanded me to drink.

The sheer blind primitive mania of self-preservation had now seized me; I was prepared to fight, to fight furiously against the inimical fluid—how I ever allowed it to pass my lips is more than I know. But I have an impression that Montrose, prepared for the emergency, reduced me to a state of half-paralysis by deftly injecting a hyperdermic; I have an impression that he called some brawny assistant to pinion my hands and force open my mouth, though perhaps these are but the remembrances of delirium; all that I can be sure of is that there came a time when I felt the drug, unpeppably bitter and more subtly disagreeable than polluted flesh, go coursing between my lips and down my throat.

I know that the next instant I screamed, screamed like one who had been stabbed. Pain clutched at my heart with rending talons; great lights flashed confusedly before my eyes, and in my ears was a muffled sound as of heavy waters; I felt as though seized

and borne off in a great bewildering whirl; my senses swam around and around, around and around, and I seemed to be buffeted feather-like by some tremendous gale; then by degrees all things slipped from me, the pain vanished, the stir and the turbulence drew far away, faint and inestimably far away, and over me imperceptibly came numbness, silence, and the dark.

I COULD not judge how much time went by before consciousness returned. But it seemed as if there had been a sheer void, perhaps of many hours; and as my stunned mind came slowly back to an awareness of itself and my dazzled eyes again received the light, I had at first the impression that I lay on my own too-familiar cot at home; and I half expected to hear a scolding voice inquire if I intended to lounge away the day in bed. Then gradually, as my eyes made out the spotless white plaster of a ceiling that was surely not the mottled ceiling I had known, remembrance came stealing back upon me, and I recognized that I was still in one of Montrose's rooms. My emotion now was one of thankfulness at being still alive, but at the same time I was not altogether thankful, for I was somewhat dizzy, and along my spine there was a numb sensation which, if not exactly painful, was far from agreeable.

It was only a second before my discomfort gave way to bewilderment. I tried to rise from the operating-table, but neither my arms nor my legs seemed capable of movement! I tried to bend my neck so as to gather in the details of the room, but the inflexible muscles would not stir! I tried to close my eyes for protection from the electric glare on wall and ceiling, but the lids would not obey the message of my brain! Then in terror, stricken with the acute realization of my helplessness, I sought to scream for aid—but my lips would not open, and not even the faintest mumbling from my throat!

"Am I dead or alive?" I asked myself, still too astonished to be wholly mastered by my alarm. And then I made another discovery—the most appalling discovery of all, it seemed to me. My breast was not heaving with the heart-beat, there seemed to be no intake of air through the nostrils! Was I dead, after all? But, if dead, how could I be conscious? Apparently I was faced by an inescapable contradiction. The riddle was too complex for me to solve; I could only lie there, still as a stone, not a tremor passing through my body, and yet in my mind the most terrorizing doubts and misgivings, the mute agony and wonder and apprehension of a trapped creature lying pinioned in the pitfall that may prove to be its tomb.

It seemed an interminable interval before there came any change. Meanwhile time after time I strove to move, to lift so much as a finger, to shift an eyelid, to force a whiff of air between my rigid nostrils, merely in order to assure myself that I was alive—but my mutinous muscles had declared their independence of my will, and it would have been as easy to induce the very walls to bestir themselves.

One may well believe that it was with relief that I at length heard the door swing open, and was aware of someone entering the room. It was annoying in the extreme not to be able to bend my head to survey the intruder, nor even to speak a word of greeting; but almost instantly the gaunt shadows wavering against the opposite wall informed me that probably the newcomer was none other than Montrose himself. A moment later this judgment was confirmed, for I beheld the severe face of the professor bending over me solicitously, a face now seamed with anxiety and stubbly with at least two days' growth of beard. In my confusion, I did not at first recall that Montrose had been

clean-shaven when last I beheld him; all my energies were absorbed in trying to flash him some signal of my distress. But although he stared at me with stern inquiry, he seemed to take no note of my appealing answering stare; his eyes did not quite meet my eyes, and his gaze was as impersonal as though I had been blind or asleep.

After a second, I felt him reaching for my wrist, and was aware that he was performing the motions of taking my pulse. But the results did not seem to satisfy him; and it was with no relaxing of severity that he drew forth his stethoscope and sought to listen to my heart.

Still the examination appeared not to his liking; he nodded his long, sagacious head like one in sore perplexity, and meditatively pushed open my unyielding mouth and thrust in a thermometer.

"Professor! Professor!" I sought to exclaim, in a frenzy, now that my lips had at last been parted. "Can't you help me? For heaven's sake!"

But it was of no avail. Not the faintest murmuring issued from my paralyzed mouth; it was only with my imagination that I had spoken.

A MOMENT later Montrose, staring lugubriously at the thermometer, withdrew a step behind me and out of sight; but now I could hear him mumbling to himself, incoherently mumbling in a way that was most disquieting. I listened with eager attention, but at first, while he went pottering about among some instruments behind me, all I could determine was that he was mightily displeased about something. At length I thought I heard him repeating to himself, "Five days already! Five days!", but I was not quite sure; then, after several seconds, I clearly distinguished the words, "We'll try the other way! It can't fail, simply can't!" And, after another moment, came the chuckling affirmation, "Never has failed yet!"

It would be impossible to describe the terror that now seized me. If I had previously suspected that my employer was demented, I was now certain of the fact! And if I had had misgivings as to the outcome of the experiment, I now had a tormenting dread! Already I half gave myself up for lost—already, though I had as yet no intimation of the tragic sequel, I could feel the grave opening to receive me.

Looking back at those melancholy events across the distance of many years, I am convinced that the experiment had not gone greatly awry. I am convinced that I was merely in a state of suspended animation from which the professor could have revived me; but, perhaps because of a minor defect in my heart, or perhaps owing to one of those little miscalculations which are not uncommon in scientific investigation, there was some flaw in the results; and it was in order to remedy this flaw that Montrose took the step which was to bring catastrophe upon us both.

"I'll fix it up! I'll fix it! I'll fix it!" fiercely muttered the professor, still oblivious to the fact that I was "listening in"; and he flung open a door directly ahead of me, flashed on an electric switch, and revealed long rows of shelves lined with queer tubes and jars and with dark-colored, labeled bottles. At the same time, a curious pungent chemical odor smote my nostrils; and I needed no unusual powers of divination to understand that this was where Montrose performed his experiments.

Evidently the project that occupied him now was particularly absorbing, for several hours must have passed while he fumbled about among his test-tubes and beakers. At times I could still hear him muttering to himself, though in tones of increasing satisfac-

tion; at times I could distinguish a queer whirring or bubbling sound as of a gas burner, and the more violent hissing of escaping steam; while such a blending of curious odors assailed me that it is impossible to describe or even to recollect them.

At length, bored by the whole interminable proceeding, I had fallen into a vague reverie, and was wondering about my wife, and how she was taking my absence. Then, on a sudden, I heard the professor chuckling in glee, and thought I could make out words of self-congratulation; then there came the sharp scratching of a match, followed almost instantly—by a report so violent and appalling that even to this day I shudder at the memory, and my trembling fingers hesitate to record it.

Suddenly the room was wrapped in a sheet of white flame; suddenly there came a roar as of discharging cannon, mingled with an unearthly scream of anguish; suddenly it seemed as if burning tongues lashed out and smote me, while my senses staggered and all things appeared to be ending in one long deafening crash. It may have been only an instant before the flame flashed out and the terrible detonations ceased, but for me that instant expressed all the dread and suspense and agony of the universe; it seemed the length of a lifetime before I beheld wreaths of black smoke ascending from the place where the fire had been, and heard, not an explosive din, but the convulsive groans of some tormented being.

Before I had collected my senses sufficiently to realize who it was that was groaning, the door burst furiously open, and three dishevelled creatures, fairly tumbling over one another in their haste, rushed in with confused cries. One was the maid servant; one was a crochety serving-man that I had observed before; one was a wrinkled woman, the professor's wife. But this I could not determine until later; at the moment, I noted little except the pallor of their faces and the exclamations of terror with which they entered. Dashing past me as though I did not exist, they plunged into the laboratory—to stop short with low exclamations of horror, followed by a single long-drawn wail from a woman's throat.

The next that I recall is that the crochety old man and the maid were lifting a limp form up upon a sofa just before me. I caught but a glimpse of the face, and yet that glimpse shall haunt me until my dying day—horribly torn and blackened, with one of the eyes closed, and red streaks radiating from a gash on the forehead, it was yet unmistakably the face of Montrose!

Meantime the unfortunate man still struggled spasmodically, while mumbled words came by incoherent snatches from his burnt lips. It was pathetically apparent that there was something he was striving to say; and the agitated manner in which he kept pointing and pointing at me gave proof who was the object of his speech. I fancied I made out something about "The formula! Formula!" though the words were broken and but half enunciated; but I was sure I heard him say, "That bottle there—that bottle—take that bottle—give him—give—give—"

There was a final helpless gesture in my direction; the painful words trailed out in a sudden gasp; there was a momentary pause, a breathless silence more terrible than speech; then followed a racking cough, another gasp, half like a groan, and another silence; then, finally, a low rattling noise that throbbled convulsively for an instant, and died away.

And weirdly through the room there sounded the sobbing of a woman.

I MUST now pass over a slow-dragging lapse of time. At least three or four days crawled by for me in a

hopeless blank, while vague wonder, dismay and dread filled my mind. Occasionally, by incalculable snatches, I slept; occasionally I reviewed in dismal reverie the incidents of the professor's death; more often I allowed myself to ask what was to be my future, and how, if ever, I was to be revived. But amid the stir and confusion that filled the house, no one seemed to take any notice of me; I lay on the operating-table as helpless as a corpse, and indeed I was not certain but that I was a corpse; while the monotony of the intolerable hours was such that I feared I should go mad before the time came to resurrect me.

It was not until after the funeral that my tantalizing uncertainty gave place to an appalling certainty—and that my doubts were answered and my worst fears vindicated. I do not know just who were the men that came to inspect Montrose's laboratory and unwittingly to provide me with the ghastly information; but I do know that they performed their task with thoroughness, and left me in a despair which, alas! was only too well justified. No doubt they were men of science, for the broken chemical apparatus and the labels on the shattered bottles seemed to offer no mystery to them; but as they passed inquiringly through the two rooms, occasionally pausing to cast a puzzled glance at me, they demonstrated that there was much in Montrose's experiments that they did not understand.

To my amazement, they drew forth from the recesses of the laboratory a multitude of immobile dogs, cats and rabbits. Some had been hopelessly scorched by the explosion; others, apparently uninjured, lay limp and still as if dead; and though only a few were held up where I could survey them, the conversation informed me that they were all in much the same condition.

"Can't understand what Montrose was doing with all these animals," commented one of the men. "Not a sign of life among the lot."

"I gather that he had been laboring for years to produce suspended animation," returned the other. "Seemed to think he had succeeded, too. Unfortunately, he was so soured by failure that he wouldn't let anyone in on the secret, and it appears to have perished with him."

There ensued a pause, punctuated by a variety of swishing, rattling and clattering sounds indicating that the men were ransacking the place. But evidently their efforts met with no reward. "No, not a sign of anything!" one of them dolefully summarized, as they drew toward the door. "If he left any written formula, it was no doubt destroyed in the explosion."

The speaker hesitated; then, with an eloquent gesture, pointed to me, "Assuming that that specimen there isn't really dead, as he seems to be, it will be impossible now to bring him back to life."

Then, while horror seized me and I could feel once more the cold touch of the grave, my second visitor expressed his opinion that, "We're not going to bring him back to life, anyway; it's easy enough to see he's dead already. The only decent thing to do is to bury him as soon as possible."

"No doubt you are right. That does seem to be the only course," coincided the other. "I shall say so in my official report."

And with those words they sounded my death-knell. There followed some further comments, which I did not hear or try to hear—I was as one who had listened, gagged and bound, to his own sentence of execution. During the long, slow hours that ensued, my mind was in a delirious whirl; blind bewilderment, rage and dread stormed by turns through my tortured consciousness; fiery visions tormented me as never before, and

terrorizing memories recurred and were magnified by my distorted fancy; I saw Montrose, alive again, a red-hooded demon about to cast me into the flames of Hell, and behind him I beheld the dark, deep pit that was to open for my shrivelled remains. In more lucid moments the stabbing thought came to me that I was dead, and must suffer the fate of the dead; then followed the fervent conviction that I was really alive, and must surely somehow be restored again to the living; then belief mingled passionately with hope, and my desire to revive gave birth to the conviction that surely I must revive before it was too late.

Fortunately, though my muscles still were paralyzed, there was one faculty I had not lost; and finally sleep brought rest to my wearied mind and bore me off to far, peaceful meadows where my limbs were once more supple and free.

IT seemed many hours later—possibly it was the next day—when I was aroused by the sound of voices. Three persons had entered the room—the professor's wife and two men, both of whom she addressed as "Doctor." Their purpose soon enough became evident, for they bent over me appraisingly, feeling for my pulse, listening through a stethoscope for what should have been my heart-beat, injecting sharp little instruments beneath my skin to test my blood-reaction. And their manner was so solemn that they reminded me of coroners conducting a post-mortem.

No doubt they actually were conducting a post-mortem. "Dead! Stone dead!" was their verdict, though it was garnished with a host of scientific epithets that I cannot begin to recall. "Apparently the cause was some acute cardiac derangement."

"And you don't believe there's any hope for him?" questioned Mrs. Montrose. "You know, my husband always was saying something about bringing the dead back to life."

Both of the men laughed awkwardly. "If we could bring him back to life," stated the less solemn of the two, "we could give life to a wooden statue."

Mrs. Montrose was visibly moved. "Too bad! That's really too bad!" she lamented, with such genuine regret that my heart warmed to her. "There was a lady here several times inquiring for him, and I always had to put her off, for I didn't want to tell her the worst till I was sure. Poor woman! Her eyes looked so red! But I suppose now I'll have to let her know."

"Yes, by all means, let her know at once," advised one of the men. "The death-certificate will have to be made out immediately."

And with that, to my unutterable horror, the speaker approached me again, and drew a heavy white cloth over my eyes.

It may have been two or three hours before I again heard the door opening, and listened once more to the sound of voices. And this time I was conscious of something strangely familiar. Those thin, querulous, well remembered tones—did I have to guess twice whose they were? Though I was incapable of movement, I almost trembled; I was glad to have been reduced to the mute irresponsiveness of stone. Yet I half envied the dead who did not have to listen as I listened then.

"So here is where he is?" cried the newcomer, in a wailing voice that I knew only too well. "So here is where he is? Poor, poor Henry! That you should have come to this!"

And, sobbing, she flung herself toward me, snatched the veil from off my face, stared at me for one long, contemplative, sorrowful second, then threw herself upon my prostrate form with manifold lamentations.

But in a few minutes the storm had begun to subside. "He was such a good husband! Such a good, good husband!" she mourned, becoming articulate once more. "Never was a better man alive! Wasn't a thing he wouldn't do for me!—no, not a thing!"

Whereat she burst into tears again, while between sobs she offered such tribute to my memory as she had never once tendered to my living presence.

I began to feel almost flattered; I began to wonder if, after all, I were a worthier individual than I had imagined.

But the greatest surprise remained until Kitty was ready to leave. "I don't know what I'll ever do without him!" she sighed to the wet-cheeked Mrs. Montrose, after she had dried her own tears. "I really don't know how I'll get along!" And then, in a confidential whisper, after several remarks that I could not quite catch, "He was such a good provider. Such a very good provider!"

This was news to me, for, during all our married years, I had been accustomed to hearing quite the contrary.

"But I thought he had been out of work," Mrs. Montrose timidly suggested.

My wife stood staring lugubriously at the floor. Slowly, as if greatly restraining herself, she replied, "Yes, but only for the moment. He wasn't sure which—which of several offers to accept. Of course, you know the arrangements for helping your husband."

"No, I don't," declared Mrs. Montrose embarrassed.

"Five hundred dollars," specified my wife. And just at that instant I chanced to catch a glimpse of her face. Her lips, drawn up in hard lines, contrasted strangely with her red eyes and tear-stained cheeks.

"Of course, it's only a debt of honor," conceded Kitty, graciously. "I wouldn't press my claim—no, I wouldn't think of such a thing."

Still engaged in low-toned discussion, the two women passed out of the room. But half an hour later, when next I beheld my wife, a check rested securely in her hand.

Firmly gripping that precious paper, she flung herself once more upon my unresponsive form, and wept and wept more voluminously than ever, and seemed even more sorely bereaved as she tearfully avowed what a good husband I had been.

AGAIN let me pass over a considerable interval. I say considerable, for while, as the clocks reckon time, it was but two or three days, still for me it contained whole slow-drawn eternities, as was fitting for the farewell period of my life. There was one advantage which I enjoyed during those harrowing hours; my paralysis had made me immune to all sensations of hunger, thirst and fatigue, so that the only real discomfort I suffered was mental. But a thousand times rather would I be scourged by all the demons in hell than endure again what I then endured!—the reader may judge of my feelings when I was present at a discussion of the details of my own funeral; and when I was removed from Montrose's home to the mortuary parlors; and when I heard my wife haggling with the undertaker as to whether my coffin should be of cedar or of steel; and when I was washed and prepared for the final rites, and arrayed in a dress suit such as I had never worn during all my mortal days; and when at last I was placed in the open casket, with eyelids forced shut, as if to anticipate the coming of the dark; and when—culminating indignity!—I heard the voices of several acquaintances as they surveyed what they were pleased to call my "remains," and scattered flowers I did not desire, and cast conventional plying

phrases such as one may bestow upon a wounded cat or outcast dog.

During all those long, monotonous, lonely hours I had never wholly given up hope. I had always felt that somehow, by some miracle which heaven reserved for my special benefit, my true condition would be discovered, or my limbs would marvelously regain their powers and I would startle the mourners by rising from the cold slab of death. To be buried while still conscious!—to be lowered into the dark earth, and feel the heavy earth falling upon one's casket-lid, and linger on in the silence and the cold till the grave-worm and corruption had done their work!—it was all unthinkable horrible, it was too fearful to be possible; surely, I would awaken as from a nightmare. So I thought; but the advancing days brought me no reason for hope; and like the convicted murderer waiting for the reprieve that does not come, I saw the shadow of doom drawing near with the slow, sure pace of the inevitable, while the longed-for word was not spoken, and the longed-for sign was not given, and the preparations for my departure from this earthly scene went forward without interruption.

At length came that morning which for me was to be the evening of all things. At length came the time for that ceremony which custom and religion prescribed, when a preacher who had never seen me or heard of me before discoursed upon my merits, and my wife appeared for her last sobbing glimpse of my flower-strewn form. But even then, though terror tore at my heart and my whole spirit rose up in a desperate plea to man and God alike to save me, there was no answer on heaven or earth; no one heeded my entreaty, but the gruesome ordeal proceeded, almost as though I were a human sacrifice inexorably offered upon the altar of some pagan deity.

For the last time, I strove to force open my rigid lips; for the last time, I tried to shift my closed eyelids, to move some muscle of the arms or legs, to scream out some protest that would stay the hands of my executioners. But I was impotent as any corpse; and the longed-for miracle did not arrive. And in the slow, protracted space of a second that seemed to mingle with all the slow, sad seconds that had been or were to be, I saw the coffin lid closing down above me almost without a sound; then, conscious of the narrow space that confined me, I felt myself being lifted and jolted away, being lifted and jolted far away. . . . And my consciousness grew hazy and blurred, and grotesque visions danced before me, and I was at once in a delirium. . . . And it was only vaguely that I realized at length that the jolting had stopped; then I felt myself shaken by the severest, sharpest jolt of all; then I heard a series of dull thrusts and rattlings as of something falling heavily just above; and finally I lost track of those rattlings in the deepest and most intense silence I had ever known. . . .

Now, in that cramping, airless space, I was falling into a stupor; my mind was slipping from me, I had lost the power of feeling; the crazy, nightmare visions wavered and were gone; my terror flickered out, my grief was forgotten, I no longer wondered or desired, but, from somewhere amid the merciful darkness, came slumber and oblivion.

### CHAPTER III The Awakening

IT seemed a long, long while later when I awoke. I do not know what it was that gave me the sense of the passage of time, for the interval had been a dreamless blank and the revival of consciousness was

so abrupt that at first I was scarcely aware of my own identity. Like a sleeper aroused by falling out of bed, or like one disturbed by an earthquake, I was jarred and shaken tremendously; I was summoned, as if from sheer nothingness, to hear a dull roaring in my ears, to feel something shapeless and heavy bearing down upon my chest, to find myself slipping, slipping through a vague darkness. I halted with a jerk, while the sound of roaring increased, mingled with a terrifying rattling and clattering which swiftly grew louder and almost as swiftly died away.

All this had lasted perhaps two seconds—two seconds magnified to the length of minutes. Yet so overwhelming was the shock that I was too bewildered to wonder what had happened, or where I might be. It was only gradually, and then with painful difficulty, that I collected my confused wits and recalled the circumstances of my burial. And then, while I confusedly asked myself whether I had survived death and were awakening in the Beyond, I became aware of a great stiffness and soreness in my limbs, and groaned in agony; and at the same time I strove instinctively to open my eyes.

But for a moment the refractory lids would not obey; and as the memory of my paralysis came back to me, the fear that I was still helpless possessed my mind. But no! I must be recovering; slowly, painfully, like a door that works on rusty hinges, the lids at length slipped open, and the welcome light of day dazzled my eyes.

But how intolerably bright all things appeared! At first I could scarcely bear to look, so brilliant seemed the sunlight; then, as by degrees my vision adjusted itself to the glare, I was able to distinguish the details of a most unexpected scene.

I can truly say that, in a life of many surprises, this was the most complete surprise I ever received. How came I to be here on the sea-beach, on an unknown sea-beach with the tall breakers tumbling no more than a stone's throw away? And how came I to be stripped naked as a new-born babe? How did it happen that my lower limbs were buried amid pebbles and sand, while I was lying awkwardly on one side as though thrust there by some random hand? Just above me loomed a bluff ten or twelve feet high; on every other side was only sand and water; and it was long before my sluggish senses took in the full details and I observed that the face of the cliff was newly gashed and torn, as though a mass of earth had been dislodged in a miniature avalanche.

But as yet, in my misery, I did not appreciate the significance of this fact. As never before, I was conscious that I was breathing, and that it was agony to draw breath; ever since my first rude awakening, my lungs had been sucking in air by long, thirsty gasps; and, with each effort, dagger-like pains shot through my breast and I thought I was to sink down and die. At the same time, I was aware that my heart was beating again—or, rather, thumping and hammering fitfully like a pump long out of use; and my temples were throbbing and aching almost unbearably.

But by degrees the pain subsided, and after a while, though still wretched, I felt well enough to extricate myself from the sand and pebbles. I was vastly relieved to find that my limbs had once more the power of movement; yet they were exceedingly stiff, and feeble as the limbs of a sick man; and I suffered the tortures of the damned before I had succeeded in clearing away the impediments that pinned me down, and in rising to my feet.

I imagine that I consumed an hour or two in this process; and during that time I made a curious ob-

servation. The breeze that blew upon me from the sea was pleasant and warm, so much so that I suffered no discomfort from my nakedness; yet when I was buried, it was bleak December. Could so much as five or six months have passed while I slept?

When at last I was able to totter forth painfully upon my reviving limbs, I set about as best I could to explore my position. First I stared inquiringly at the sandy mass from which I had extricated myself; but, almost at the first glimpse, I stepped back with an exclamation of horror. A smooth rounded object, which I had mistaken for a rock, proved not to be a rock at all. It was a broken and yellowing human skull!

**S**PURRED on by a gathering suspicion, I conducted an eager search. At first I discovered nothing at all to answer my conjecture; then I unearthed a badly rusted metallic object, which neither confirmed nor denied my theory, though it was shaped provocatively like a coffin handle; then, when I was about to turn from the quest, I unburied that which seemed to lend reason to all my fears.

Projecting several feet from the sand, was a huge and crumbling block of granite, preyed upon by the elements and bearing all the signs of extreme decrepitude, yet clearly retaining the shape of a tombstone. And upon its worn gray surface, there was a trace of lettering, almost effaced! Time had done its work well, for I could distinguish not a syllable, though of the original purpose of the stone there could be no doubt. Had it not recently slipped from the top of the bluff? And had I not myself been hurled down in the same disturbance? And was not the shock a cause of my revival? Had I not been buried alive, though in a state of suspended animation, possibly beneath some stone such as this? And was I not now regaining consciousness amid the ruins of my graveyard?

Incredible as the explanation appeared, it was the only one I could conceive of to meet the facts. And yet, obviously, it did not meet all the facts. For how had I escaped from my coffin? And how had I come to be unclad? And in what way had I found myself by the seashore? I had been buried, assuredly, somewhere in the outskirts of New York City, and yet I knew of no New York cemetery that fronted on the ocean. Must I, therefore, disregard the evidence of the skull and tombstone? But, if so, I must confess myself utterly bewildered.

Amid the depressing doubts that swept over me, I half imagined that I was no longer alive at all, but rather a spirit reviving somewhere on the shore of the Afterworld. It came to me, also, that I was possibly the butt of some malignant power that delighted to taunt and tantalize me, and that took joy from my confusion. I even wondered—such was the feverish distortion of my fancy—whether I was upon our familiar earth at all; whether I had not been transported to some remote planet revolving about some unknown sun.

Certainly, had I actually been upon some alien planet, I could hardly have met with ruder surprises than those that were still in store.

In another moment a cold shiver of fear shot down my spine; a strident noise behind me caused me to wheel about abruptly. The sound had been sharp-cut and definite as that of a steel drill driving its way through rock; yet at first, when I sought its source, I beheld nothing at all. Then, after a terrified moment, I was conscious that some creature, which I believed to be some peculiar form of bird, was darting through the air before me. Its flight, however, did not seem to be that of a bird, though its green color demonstrated that it could not be a bat. It alighted on a stone not many

yards from me; and I, with heart unaccountably fluttering, moved forward slowly for a close glimpse of it. But my ears were smitten with a deafening whirr, and it had leapt into the air and out of sight before I could steal within arm's reach—though not before I had fixed its outlines clearly in mind. It was not a bird at all, but a grasshopper!—a gigantic grasshopper, not less than two inches tall and eight inches long!

Had not subsequent discoveries confirmed this observation, I should hesitate to report it at all. I should ascribe it to the vagaries of a diseased fancy, should believe it to be a product of delirium. Even at the time, I scarcely had faith in what I saw; I realized that grasshoppers eight inches long did not exist anywhere, and the sight of this creature seemed to confirm the theory that I was dreaming.

Yet still stranger sights awaited. During the next hour, I managed with difficulty to drag myself, by a gradual, roundabout route, to the top of the bluff. I was in dread lest some passer-by surprise me in my state of nudity; but, having nothing wherewith to cover my nakedness, I had no choice in the matter. No human being was to be seen, however; nor was there any sign of man or the habitations of man at the top of the cliff. There was only a sandy waste, which rose gently for a few hundred yards, and ended in a low ridge. But there was one object that instantly drew my attention—a glistening spire of some steely metal, pointed like an Egyptian obelisk, and perhaps a hundred feet in height. What could it be? I wondered. Never in all my days had I seen such a tower; it seemed impossible that it could belong to my own familiar world. Yet it obviously was no mirage, for I approached it and pressed my hands against the sun-warmed, polished metal.

But it was not the curious shape and appearance of the object that contributed most to my bewilderment. It was an inscription that stared boldly on the seaward side—an inscription confronting me with huge undecipherable characters of red and black. The letters were the most singular I had ever seen; they were neither in Latin, nor in Greek, nor German, nor Russian, nor Chinese. They represented no language that I had ever encountered. Their fantastic, almost uncanny appearance, only served to fill me with a deep, sinking sensation, as though the message they bore was that I was a stranger lost in an unknown world.

**I**T is impossible to know how long I stood staring at that mysterious lettering. Probably an hour or more went by, while I was as one stunned and smitten, almost too puzzled for wonder, certainly too perplexed for clear reflection. I scarcely noted that the day was drawing to its close, that pale pink clouds were drifting overhead and that the sea was taking on a reddish shimmer; I scarcely heeded the slow retreat of the sun, and the lengthening shadows that foretold the dark; I was hardly conscious even of the hunger awakening within me, and of the reviving thirst; and for a long while it did not occur to me to wonder how I should pass the night.

It was fortunate, however, that my limbs, while still feeble and sore, did not seem fatigued; it was also fortunate, from one point of view, that I had sufficient food for thought to occupy me during the hours of darkness. For it was only after the last trace of twilight had faded that I made the most amazing of all my discoveries.

The unaccountable fact was not that a strange glow appeared against the western horizon, a strange golden glow which did not alter perceptibly until the dawn, when all of a sudden it vanished. Assuredly, this was

surprising; but more extraordinary by far was the appearance of the stars. Extraordinary, I fear, is but a weak adjective to describe that which I saw; say rather that it seemed of the nature of a cosmic revolution, a metamorphosis of all known and changeless values. Poets have been wont to speak of the "eternal constellations"; but eternity itself, it appeared to me that night, had gone awry, for the constellations were no more! Literally, the constellations were no more!—the Great Bear, and Orion, and the Pleiades, and Andromeda and other star-groups that I had learned to recognize from childhood, were not to be seen. In their place, unfamiliar constellations flickered and gleamed, as though the stars had been swept aside by some gigantic duster, and newly assorted. Here and there, indeed, the arrangement gave hint of some known order, but never more than a hint; always there were sharp dislocations. And amid the appalling and disordered wilderness of the heavens, there were only two signs to prove that I was still on earth: the one, the planet Venus, which shone steadily and brightly low in the west, still the "evening star" beloved of old; the other, the far filmy band of the Milky Way, which glimmered dimly and mysteriously and yet familiarly as ever in the moonless skies.

There were only two imaginable explanations. The first was that I had gone insane, or was dreaming; the second was that the change was real, and bespoke an enormous lapse of time. And the former theory, I must admit, seemed to me by far the more plausible, for while my meager astronomical knowledge informed me that the stars were constantly moving, still I knew that the change was so extremely gradual that its effects could be measured only in terms of thousands of years!

During all the hours of that brief summer night, I lay on the soft sand beneath the tall steel monument, a prey to such fears and doubts as have seldom beset the mind of man. To grapple with the mystery seemed impossible; I was powerless as an ant that would explore the secret of a mountain; the more I pondered, the more hopelessly I was bewildered. And when at length the sun lifted its head from above the eastern waves, I seemed further than ever from understanding what had befallen the world and me.

Apparently there was now only one possible course: to explore the country, and try to find men who would succor me and explain my predicament. Accordingly, I began to make my way slowly down to the beach and along the firm wet sands near the water's edge. But I proceeded much more rapidly than yesterday, for my limbs had regained much of their suppleness. I was tormented, to be sure, by a growing hunger and thirst; yet these were almost to be welcomed, since they were among the few familiar signposts in an unfamiliar universe.

I HAD been on my way for perhaps an hour, and had traveled probably two miles, when I rounded a sharp promontory and was startled by an entire change of scenery. The beach ended abruptly; before me loomed a long line of cliffs whose sides, I was surprised to observe, were cut almost with mathematical evenness; while from the top, possibly two hundred feet above, long intricate trestle-like steel devices reached out a mile or more into the waters. These were not less than twenty in number; each was composed of a mass of curiously interlinking tubes, cables, stanchions and girders, giving them the appearance of the skeletons of fantastic reptiles; and each ended in an enormous fan-like device, cut low above the waters and stretching for hundreds of yards in both directions with slowly swaying and glittering metallic sides.

But I did not note these details at a glance. I was too overwhelmed to do anything but stare in an incredulous daze at these stupendous engineering works, observing little more than their magnitude and strangeness. Now I knew, too plainly for further doubt, that somehow I had left the known, familiar world; I knew that some extraordinary transformation had occurred while I slept; and an alarming suspicion, which at first had seemed preposterous, began to confirm itself in my mind.

But I had little time for mere empty wondering. Events began to move with startling rapidity. I had scarcely caught sight of the inexplicable steel structures, when I became aware of a peculiar sound to my rear, half like the tones of human voices, half like the barking of a dog. It vibrated queerly, with a quick, mechanical rhythm, unspeakably rasping and disagreeable; and terror filled me as I wheeled about to determine its source.

For an instant I beheld nothing. Then, rounding the turn of the promontory, half a dozen grotesque creatures swept into sight. The first glimpse informed me that they were human, but how near they seemed to the bestial!—they looked like monsters striding straight from the depths of a nightmare! Was it only that my vision was warped and blurred? Or did my senses speak correctly when they told of huge, squat, six-foot frames, capped by heads small as those of babes? And was I right in thinking them earless, with bloodless skins of a newspaper hue and toothless mouths inanely gaping? Certainly, their appearance was disquieting!—their smooth, bald heads, sloping back ape-like above the squinting narrow eyes, made them look absurdly imbecile; yet at the same time, with their gorilla-like expansion of chest and arms, and their huge muscles rippling visibly beneath uniforms of slaty gray, they gave the impression of tremendous and sinister power.

Upon catching sight of me, they halted in evident amazement. A chorus of hoarse, brutish grunts issued from their throats; they pointed their long, hairless arms excitedly in my direction. In an instant, the grunts gave place to a loud unpleasant rattling, which, from the contortions that they performed, I judged to be a form of laughter; then, while I stood surveying them doubtfully, uncertain whether to approach or flee, they all began to advance simultaneously toward me. For a second I held my ground, and in that brief interval I noted how their limbs seemed to move mechanically, each in perfect time, like the limbs of a military company. But when I caught a glimpse of the dull, snaky light in the eyes of the foremost, my courage deserted me, my lips were convulsed in a scream. I was conscious that I was turning and racing toward the cliff.

But from behind me came the thudding of swift footsteps. I strained to increase my pace, but to no avail; with disconcerting rapidity the pursuers drew near; it could not have been ten seconds before a hand reached out and seized me, and I was flung violently to earth. Then, writhing and squirming ineffectively, I was tossed to the shoulders of one of the men as easily as though I had been a fractious puppy; and, riveted there by an arm that seemed to have the strength of steel, I lay sweating and panting in terror.

Another moment, and my weight was shifted to my bearer's back, as would be a sack of potatoes, while the terrible pressure of the heavy hand persuaded me not to struggle. And the next second, listening to my captor's gibber in some unknown tongue, I was being borne helplessly up a stairway in the cliff toward some obscure destination.



The beach ended abruptly; before me loomed a long line of cliffs whose sides I was surprised to observe, were cut almost with mathematical evenness; while from the top, possibly two hundred feet above, loomed intricate, trestle-like steel devices which reached out a mile or more into the waters.

## CHAPTER IV

## Small-Heads and Large-Heads

ARRIVING at the top of the cliff, we were confronted by a score of gaping, chattering creatures precisely similar to my captors. But among them was one of less extraordinary appearance. His bald head was of normal size, and the contours of his seamed face were almost human, except for an extreme and wolf-like sharpening of the chin and jaws, which gave him a singularly greedy and uninviting aspect. Yet I had seen men almost like him before. The thing that most surprised me was that his arms and legs were dwarfed and wasted, being thin and short as those of a six-year-old, while his plump, rotund body, clad in a silvery cloth with golden linings, only accentuated the disproportion of his limbs.

He it was that instantly took command upon my arrival. With a word—or, rather, a snarl—he silenced his gibbering fellows; and while they cringed before him and my carrier allowed me to slip to the ground like an inert load, he stepped forward and inspected me with that curious and yet distant air with which one might examine a strange, but possibly dangerous animal.

That he was puzzled was only too apparent; amazement glittered in his narrow little gray eyes; and several minutes went by while he regarded me as if he were not certain to what genus of fauna I belonged.

During this inspection, it occurred to me that he might be able to understand me if I spoke. And so, somewhat diffidently, I began, "Where am I? What has happened to me? Who are you? Could you tell me—"

But abruptly I halted. From every throat, including that of old Wolf-face, there burst a tumult of rattling laughter. And mischievous fingers, pointed pitilessly at me, made me feel like a grinning monkey on exhibition for the amusement of children.

The first to recover was Wolf-face. The thin, morose lips curled into something like a sneer; a snapping monosyllable issued from his tongue; and, almost as by some automatic signal, the laughter of the others flashed away, their limbs became rigid, their faces grave and severe, and they stood confronting their leader like a military company awaiting orders.

It was but a second before the orders came. I could not understand what was said, and all the parties seemed chary of words; but from a little opening among the rocks, one of the men dragged a small wheeled vehicle. At the first glimpse, I thought I noticed something familiar in the looks of this machine; it was about the size of a Ford automobile, and contained two cross seats, each large enough for two persons; but the wheels were much smaller than those of an automobile; the hood was spherical in shape, and was located in the rear; and, projecting from beneath the car, was an intricate mass of machinery, which in no way resembled that of a motor car.

Before I had had time to inspect this contrivance in detail, one of the men lifted me bodily from the ground, deftly lashed my feet together and my hands behind me, and deposited me in one of the rear seats. And as I writhed helplessly, cursing him for the liberties he was taking, and conceiving terrifying visions of the future, I observed at my side none other than Wolf-face himself. He cast a single impersonal glance at me, strangely cold and penetrating, which made me shiver as though he had been an eagle and I his prey; then he issued a brief, sharp order to two of his fellows, who took their places in the front seats; and then, with a thoughtful, puzzled light on his pitiless features, he

leaned far back in his seat and stroked his smooth chin as though forgetful of my presence.

I was now resigned to an involuntary motor ride, though how the machine could make its way over the sandy, rock-strewn ground was more than I could imagine. My doubts were soon relieved, however, for with a buzzing like that of a small electric motor, the car began to move—not horizontally, but vertically! Needless to say, I was terrorized—what species of wizardry was this? But my alarm went unnoticed; straight up and up we glided, not rapidly, but steadily, until we had attained a height of several hundred yards. At first, in my alarm, I did not observe the huge bladder-like devices which had been summoned into existence almost with magical swiftness, and which stretched out beneath us on both sides for many yards and buoyed us up.

Yet these contrivances evidently did not interfere with our speed; having gained the desired height, we suddenly shot forward horizontally with incredible rapidity. The first shock was sufficient to take away my breath; it was some seconds before I had half recovered. Then I became aware of an amazing spectacle; the ground beneath us was receding to eastward at such a rate, that it was impossible to observe the details of any object. I could only see that we were skimming over a bare plain, herbless and rocky and apparently uninhabited; here and there I beheld a moving shape, though whether man or beast I could not say; and all else was a confused and whirling blank.

IT could not have been more than a minute before I detected, far in the distance, the shimmering thread of a river—or was it the threads of two rivers? I was not sure, nor did I greatly care—my eyes were fastened beyond the ribbon of water upon what seemed to be a range of mountains. But what a range of mountains! They seemed like the fabrications of a dream, or of a fairy tale; they were too fantastic, too regular, too strangely shimmering to be real. Evidently they were hundreds in number, yet all appeared to be of exactly the same height, all tapered in precisely the same fashion to a sharp cone, all were of the same sun-reflecting metallic hue, all were connected with their neighbors by amazingly symmetrical slopes, which descended uniformly to a height not greatly beneath the cones and far above the level of the plain.

Such, at least, was the impression that I received as I sat gaping on the airship's deck. But by this time I had become so used to marvels that I was scarcely surprised; I was hardly convinced of the reality of anything I beheld, but was half persuaded that the strange eminences, like the airship in which I rode and the desert waste beneath, were but the figments of some preposterous dream.

In another minute or two we went skimming across the river or, rather, the rivers, since there proved to be two, flowing a mile or more apart with a rocky wilderness between. A few leagues beyond the second and wider stream, we paused in mid-air, and, while the bladder-like devices slowly deflated, went sinking down to earth as lightly as a pigeon settling on the roost.

We were now but a stonethrow from the nearer mountains. And we were close enough to observe that they were not mountains at all, but rather gigantic artificial towers! They were totally unlike anything I had ever seen before; their flanks were of steel, a dully burnished steel which jutted skyward to the height of a Vesuvius; on the sides were multitudes of little round openings, less like windows than like the portholes of ships; while between each of the soaring crests was an interval of many hundred yards, covered in every in-

stance with a high and gracefully curving metallic roof.

But the appearance of these buildings did not strike me as strongly as did the peculiar odor that issued from them. It was certainly one of the most depressing and nauseating odors I had ever encountered; it reminded me of the automobile exhaust fumes on crowded city streets; but it was a thousand times more disagreeable, and seemed a thousand times more concentrated; and I know that it was not unconnected with the violent irritation that suddenly seized my nostrils and throat, and with the dull aching of my head.

Our descent was nicely calculated to bring us within ten feet of a little concrete structure, wherein sat two brawny small-headed men similar to my captors. On our arrival, they muttered in hoarse surprise, but were instantly checked by a growl from Wolf-face; whereupon, with a mechanical precision that seemed almost automatic, they trothed away to the interior of the building, and almost instantly returned with an assortment of bewildering objects.

Not least interesting, from my point of view, was a gray one-piece suit, reminding me of a bathing garment, in which they arrayed me after unbinding my hands, and which I was most thankful to receive, for I was shivering from the cold trip in the airship. True, it was several sizes too large, but no one seemed to notice this fact, nor did I at first observe it myself; I was too much absorbed in scrutinizing the other articles strewn before me. What was the object of those green spectacles? I wondered—those heavy green spectacles, with the side pieces like those worn by motorists? And what were those small black contrivances resembling telephone receivers? And what those huge ugly devices that reminded me of the gas-masks worn during the war?

To my amazement, each of my companions and myself were equipped with the green glasses, my own being thrust rudely into place without my permission or desire. Then the black telephonic objects were slipped into our ears—or into the hollows where the ears of my companions should have been; next each of the men donned a mask, and some one fastened a particularly disagreeable black affair about my own mouth and nostrils.

I must admit, however, that I had reason to be thankful for it, since it excluded the nauseating odor that had been oppressing me. I noted that it was attached by a long tube to a metallic tank that may have engendered oxygen, and by another tube to a tank that received the exhaust products of breathing; and I know that, immediately after receiving it, I felt exhilarated and revived, even though intensely uncomfortable.

Again I was forced to take my place in the little four-wheeled car; again my companions sat in their former positions, looking like fantastic highwaymen in their green glasses and great dark masks; and again the car began to move, this time along the surface of the earth and at the speed of a trotting horse. It was only a few seconds before we had passed through the wall by means of a little gate that swung open to let us pass, though there was no gateman, and that automatically closed behind us; and, once within, I was startled by one of the wildest and most bewildering and unearthly scenes I have ever been privileged to behold.

MY first impression was of blazing lights—of a multitude of blazing lights so brilliant that, despite the glasses, I was dazzled by the glare. Then, when by degrees my eyes became accustomed to the intense illumination, I perceived that I was on a city street. But how unlike any street I had ever beheld before!

It was exceedingly broad. It was wider, in fact, than the widest boulevard I had ever seen. At the same time it was horribly congested, and along its surface, covering literally every square yard, a multitude of little vehicles were flitting helter-skelter, scampering in all directions like rats in a panic, dashing toward one another as if certain to collide, and avoiding each other by a hair's breadth, while making a tumult of hissing, screeching, droning, grating and rattling that I found almost unendurable, and that I could not have borne, but for the softening effects of my ear apparatus. So impetuously were they moving, that I could not catch any of their details, I could get but a glimpse of their occupants and a vague idea of those other vehicles darting above them in the air, several layers deep, as though engaged in some mad and meaningless race.

Among this multitude, we took our reckless way, tearing in all directions as furiously as the rest, sometimes on the surface, sometimes many feet in the air, but never at any moment limiting ourselves to what I would have regarded as a safe speed. By fleeting glimpses, when we flew far enough over the mass of traffic, I was able to observe the general construction of the city: the walls of huge buildings, seemingly of solid steel, rose without a break for unthinkable hundreds of feet, blank and windowless as the walls of cliffs, and at their summits no glimpse of the sky was visible; far above us, edifice was joined to edifice by blindingly bright sheets of a silvery metal, which formed a roof over the streets and excluded the heavens.

Much to my relief, our mad flight lasted only a few minutes. Eventually, at a terrifying altitude above the street, we came to a stop on a great crowded open platform, where a multitude of wheeled vehicles similar to our own were alighting or starting off in air. Each of them, I noticed, was equipped with an overpoweringly brilliant searchlight, whose purpose, in this place of gaudy illumination, I could not understand; and each was occupied by masked and green-spectacled passengers notable for the small size of their heads.

As soon as our machine had halted, my companions leapt out without wasting a second; one of them unceremoniously slung me upon his back in my previous ungainly position, and all started along the platform toward a brightly lighted doorway glaring in the side of a building a few hundred yards away. Short as the distance was, it was too long for the atrophied legs of Wolf-face; one of his brawny fellows had to stand on each side of him, assisting him as a nurse-maid may assist a toddling child; and, even so, the effort was evidently an excessive one, and he puffed and panted prodigiously, and had to pause more than once to rest on the way.

I was really sorry for the man, for I thought that he must be ill. But I gave much less heed to him than to the sights that filled the platform; I had the impression of a buzzing excitement as airship after airship alighted and departed, most of them of the size of our own, a few much larger, but all evidently built upon the same pattern and capable of locomotion both on the ground and above it.

WE had almost reached the doorway at the platform's end when I received one of the day's severest shocks. Abruptly my attention was attracted toward what seemed to be a riot; with the suddenness of a thunderclap, there burst forth a series of snarls and hisses, mingled with shrieks, howlings and indescribable yells. I glanced back anxiously, expecting to see someone being murdered, but was surprised that no one else appeared to share in my alarm—particu-

larly surprised, since my surmise about the riot was confirmed. An airship as long as a city block had just come to rest on the platform; and out of its hundred doors, in a billowing, pushing throng, with arms gesticulating vehemently and tense muscles tugging and straining, there pressed a mob of small-heads that reminded me of stampeding cattle. But they had no easy time emerging from the ship; a mob equally great, also tugging and straining and with arms violently waving, tried to force its way through the doors and into the vessel, careless of the fact that every square inch was already occupied. So fierce was the struggle that it could last only an instant; while groans and screams came from hundreds of throats in a maniac chorus, those within the ship managed to fight their way out and those outside managed to fight their way in.

But scores now nursed bloody noses or lips; one or two were limping, and several dangled broken arms; a small-headed woman had fainted, and another wept and sobbed above the form of an infant crushed to death.

And while I gaped in astonishment, wondering what queer sort of game this might be, the airship got under way once more, thousands of small-heads jammed within in a solid black mass, and thousands clinging like trailers to little hooks, strung along its outer surface.

It was not until much later that I learned the meaning of what I had seen. The incident was really of the most commonplace; it was being duplicated every five minutes at every part of the city. It represented merely the landing of one of the Public Airway Cars, which provided transportation for those small-heads, who were too poor to afford other means of conveyance.

My attention was now distracted by other and scarcely less surprising sights. In particular, I was interested in the creatures that met us in a bristling squad at the platform's end. I was vaguely aware that they were human, and yet had a suspicion that they were no more than cleverly contrived machines; they were of large size, each over six feet in height, with legs and arms powerfully developed; but their neckless heads were little more than unsightly lumps perched between sinewy shoulders, while their dark lusterless eyes, of the size of small buttons, were as devoid of expression as the eyes of an animal. And their movements were automatic to a degree surpassing an automaton; if their fellows, whom I had already observed, acted with mechanical precision, these seemed almost to be in alliance with the laws of mathematics, for they timed each word and gesture with the exactitude of a chronometer. Up and down, up and down, up and down went their feet, steadily and without ceasing, marking time with a synchronic regularity that would have driven any military commander I had ever known who tried to get it from his men, to utter despair. Simultaneously their huge hands swung backward and forward, backward and forward, as if also marking time. But, upon our approach, these movements abruptly ceased; the bodies of all the men became rigid as death; each swung a mailed fist toward us in precisely the same menacing fashion, and each demanded, at exactly the same instant and in exactly the same curt, machine-like fashion, "Who comes here?"

At least, such were the words they spoke as I learned later. At the time, of course, I could not understand what it was that they said; nor could I understand Wolf-face's growling reply. But I do know that his words worked like a charm; that, at his first syllable, the guards began to retreat, all bowing respectfully in the same methodical way and submissively mumbling identical phrases. Then, as we stalked past, they re-

sumed their former attitude, and once again the feet began to move up and down, and the hands to sway back and forth, without pause or variation, much as if they had springs where their brains should have been and had been wound up for indefinite action.

As we entered the building, my companions removed their spectacles, masks and ear-protectors; and I was much relieved to be permitted to do likewise. This much accomplished, we proceeded a few paces through a corridor illuminated in all parts from some mysterious source; then we turned and passed through an open doorway into a small windowless room, also lighted by some radiance that seemed to pervade the very walls and ceiling.

In the center of this compartment, before a desk covered with a variety of wheels, levers and fantastic-looking machinery, sat two men who looked up in surprise at our arrival. One was apparently the twin-brother of Wolf-face, except that his countenance was even sharper and keener-looking, and that his uniform boasted numerous braids and insignia of gold; the other was a toothless and shrivelled hunchback, whose child-sized stunted body was surmounted by an enormous hairless head, with pale and furrowed brow of at least twice the normal height.

Upon entering, my companions all extended their hands deferentially before them and swayed their heads ceremoniously to right and left. But our hosts appeared not to notice these gestures; they both kept staring at me with amazed, half-frightened glances; and before the new arrivals had finished their salutations, a grunt from the gold-braided one put a halt to all formalities. Promptly, as if fearing the penalty of disobedience, my bearer deposited me on the floor. Promptly, he and his two small-headed companions ranged themselves against the wall; promptly, Wolf-face seated himself on a steel bench and burst into speech, delivering a lengthy harangue in a sibilant tongue that impressed me as most disagreeable.

To all that Wolf-face said, the hunchback and his companion listened with every sign of interest; but the furrows on their brows grew more pronounced as the speaker proceeded. When at length Wolf-face had ended, the others appeared to be questioning him, or at least conferring with him, for the conversation continued for many minutes, now in low solemn tones, now in the louder tones of argumentation, now punctuated by a long, grave pause; and the increasingly serious expression of all three men showed that they had by no means found a way out of their perplexity. Needless to say, the whole procedure bored me thoroughly, since I understood not one word that was spoken; however, I vaguely realized that it probably concerned me, that it was my fate which was being decided, that while I stood by, a mute witness, my judges weighed the question of my origin, of my future, even of my life or death.

This surmise was confirmed when Gold-braid turned to me, and, with an unpleasant grin, barked out something that was evidently a question.

I could only gape in reply. Several slow seconds passed; then, collecting my wits, I started to blurt out, "I do not—I do not understand—"

I was halted by laughter again.

But apparently my examination was already over. Once more the three men conferred; once more they seemed puzzled, while I was bored; and in the long interval of waiting I could only turn over in my mind again and again the vain, unanswerable questions, "Where am I? Who are these men? What has happened to me?"

At length, much to my relief, the conference came to an end; my fate had been decided, though in what way I did not know. The largest of the small-heads left his station near the wall, unbound my fettered feet, and lifted me to a standing posture; then he motioned me to follow him, and, with one of the men on each side of me and one marching like a corporal ahead of me, I strode away into the dimness of the corridor.

## CHAPTER V

### In Captivity

IF I had feared that my hosts' immediate intentions were not amicable, my doubts were swiftly set at rest. Their first action was to escort me into a narrow, low-ceilinged room, where they gave me food and drink—articles that, by this time, I badly needed. But what strange food! At first I had a suspicion that it was not food at all, but rather a drug by which to poison me. For the nourishment they offered, was in the shape of tiny capsules!—brown capsules and red capsules, white capsules and black, some rectangular in shape, and some round, and some triangular. These they dissolved in tumblers of water, and handed to me as though not doubting that I would drink—but I was not over-hasty, and would put the decoction to my lips only after my companions had tested it first. Apparently, however, they suffered no ill effects, and even seemed to enjoy the broth; and at last I summoned up courage to follow their example. The results were not wholly to my liking; the drink had a peculiar bitter taste, but at the same time seemed to have a nourishing quality at least equal to that of weak soup.

After I had dined, the three small-heads made an abrupt about-face and started unceremoniously toward the door. I attempted to follow, but to my dismay they shoved me back into the tiny windowless room; and when I tried to fight my way out, they made effective demonstration of the principle that a lesser force must yield before a greater. Yet they displayed no animosity, merely a stubborn determination not to let me pass; one of them even deigned to show me how, by rapping on the wall, I could regulate the lights of the room or put them out entirely; another pointed out that, by similarly rapping on the floor, I could summon forth a sort of folding couch and table; but none of them yielded in any way to my desire to escape. And so it was not long before I found myself alone, a prisoner in a dungeon.

It was useless to foam and curse; useless to clutch wildly at the air and pace the six-by-eight room like a wild beast caged; useless to pound at the walls, to stamp on the floor, to groan and tremble with the frenzy to escape; useless, likewise, either to wonder or to dread. That I was confined with some definite purpose was undeniable—but was that purpose good or evil? Time would surely answer; yet as I glanced at the bare white walls of the room, transfused with some mysterious radiance and varied only by two ventilating funnels near the ceiling, I did not take the optimistic point of view; had I been an honored guest, I would not have been lodged in quarters so uninviting.

My speculations were ended by a sudden opening of the door. I was surprised to see half a dozen solemn visitors trail in upon tottering and inadequate legs—visitors that all seemed close of kin to Gold-braid's companion, for all were grave and sagacious-looking hunchbacks, and all had enormous bald and toothless heads perched upon the bodies of dwarfs. With them were two or three of the small-heads, who looked like giants by comparison, and who assisted the pygmies in what seemed to be the unwonted recreation of walking.

What was the object of this delegation? I asked myself, not at all pleased to be honored by so many visitors. And very soon my question was answered—in a way that pleased me even less.

FROM the beginning, I did not like the intent, almost hungry manner in which the newcomers surveyed me; there was something peculiarly cold and presumptuous about their stare, and I felt somewhat like a choice zoological specimen being inspected by the curators of a museum. That I was justified in this feeling was proved only too speedily. With irresistible hands, two of the small-heads seized me, stripped me of my clothing, and stretched me prone across the floor. A mighty fist, thrust into my mouth, prevented me from screaming; another fist, threatening my throat, persuaded me not to struggle too furiously; and I had to look on almost like an aloof spectator while the party of large-heads drew near and began to scrutinize me minutely.

Evidently they were little less excited than I, for their continuous chattering, which reminded me of a noisy band of monkeys, was accompanied by many a shrill call and agitated gesture. One of them, after peering fixedly at the naked skin of my arm, grinned in glee as he pulled out some little black hairs, which he held up for his fellows to observe; another seemed particularly interested to note my finger-nails, organs which neither he nor his companions possessed; still another helped himself to a drop of my blood and examined it through an instrument remotely similar to a microscope; a fourth did nothing but listen to my heart-beat, while a fifth was occupied exclusively with prodding and pinching me in various parts of the body. And, last but not least, the gravest-looking of all my visitors was absorbed in taking notes with a red-ink pencil in a notebook almost as big as himself.

When at length the large-heads had made all necessary observations, I was permitted to rise. More angry than hurt, I slipped back into my clothes, while my visitors, suddenly oblivious to my presence, held a long and heated conference. I knew that the object of discussion was myself, for they kept referring, with excited gesticulations, to the notes in the red-marked notebook. And I suspected, though I was not sure, that the conversation was a learned one, since they spoke in long mumbled phrases that seemed almost interminable. At all events, I was certain that weighty words were being flung back and forth; often the voices rose to a frenzied pitch, and several times the puny fists were waved wrathfully—though their feeble possessors knew better than to strike any blows. At last, still arguing, they all decided to leave; and, still forgetful of my existence, they trailed out into the corridor, where the faithful small-heads aided them in the effort of walking.

It was not until much later that I learned that they had been debating whether I was one of the most debased members of the *genus homo*, or one of the highest representatives of the lower animals.

After the departure of my erudite visitors, I was left undisturbed for an hour or two. But in my raging mind there was no peace. I wondered how, if necessary, it would be possible to take my own life with the limited tools at my disposal; and I was deep in a consideration of ways and means, when once more the door swung open and a small-head appeared with a tumbler of water and more capsules! But not a sign of any other food! I was becoming extremely hungry, yet it was with great reluctance that I accepted the watery fare—I would have preferred the stalest, most unpalatable crust.

Was it that I was regarded as sick, and so was being fed on pills and bouillon cubes? Or was it—could it possibly be—that these unsavory morsels constituted the entire fare of my hosts? And would that explain their toothless condition? Fantastic as this surmise appeared, it was not long before I learned that it represented nearly the truth—the little capsules, manufactured to contain prescribed amounts of protein, fats and carbohydrates, of phosphorus, calcium and iron, provided the staple foodstuff of the large-heads, though the small-heads required also fresh fruits and grains. Each variety of capsule had been tested and certified for calories and vitamins, for solubility and digestibility—for everything, in fact, except palatability; and they all had originated in part in the roots and fibres of plants, and in part in transmuted atmospheric gases and the transformed minerals of the laboratory.

These facts, and others far more peculiar, I learned during succeeding days owing to the forethought of my captors. Less for my sake than for their own, they were good enough to provide me with a tutor; and thus I gained the key to mysteries that must otherwise have remained insoluble.

IT was on my second day of captivity that the tutor appeared. At least, I believe it was on the second day, for there had been a gap of many hours during which I slept. I was just awakening, and was still in a somewhat drowsy state, when the door unceremoniously swung open, admitting a particularly dwarfish large-head with a particularly capacious brow. Accompanying him, and assisting him as he walked, was one of the tallest and most pasty-looking of the small-heads, who carried piles of blank papers and of huge books bound in oiled cloth. These he deposited upon the floor; and, upon one of the largest tomes, the hunchback struggled to a seat, while his brawny companion stationed himself against the wall as if for protective purposes.

Then, with an engaging smile, the pygmy motioned me to squat on the floor opposite him, and prepared for the attack upon my ignorance.

It would be tedious to describe all the steps by which he taught me the language. Let it suffice to state that he proved an efficient instructor, and that, by means of monosyllables and clever signs, he was not long in acquainting me with the rudiments of his tongue. It was days, of course, before I had learned to speak more than a few phrases; but as my tutor gave me not less than five hours' attention a day, I should have had to be dull indeed not to make progress. Besides, my advance proved to be curiously easy, owing to an unexpected advantage. Having been hurled so far from the known, familiar world, I had ceased to look for any recognizable landmark—what was my surprise, therefore, and what my delight, when I discovered that the language of my captors was in some ways similar to English! The resemblance, to be sure, was remote—more remote than that of twentieth century Greek to its Homeric prototype; yet there were unmistakable likenesses; some of the more common words, such as "the," "what," and "which" were the same, while others displayed only minor modifications; and in most cases it was the pronunciation rather than the spelling that had changed. I chanced to hear, for example, a word that sounded to me like "God"; but I learned that it did not mean God in the sense that I imagined. The instructor, while pronouncing this monosyllable, significantly indicated a gold pin gleaming from his breast; and I was not slow to comprehend that "God" was the way these people pronounced "Gold."

After a day or two, my tutor thought it time to be-

gin written lessons; and then I was introduced to the contents of his books. These, I was interested to observe, were all printed in a peculiar, obscure lettering which resembled the writing on the tall monument near the sea-beach. Yet this unknown script was less mysterious than it appeared; it had an alphabet of twenty-six letters, corresponding to the letters of English; and it was not difficult to trace a clear connection with the English characters. More than that!—most of the letters were identical with those of English, but were written in a different manner; thus, they had become doubled, as follows: XX; the 0 had been enlarged and appeared as O; while the S boasted a vertical line, and had been converted into \$.

But except for such minor alterations, there was no essential difference between the alphabet which I was learning and that which I had known since childhood.

Before many days I had mastered a few simple words and learned to decipher the script; and then it was that I undertook some elementary reading in a book provided by my instructor. And a most interesting task this proved! Most bewildering, also!—I hardly read a word that did not make me gaze wide-eyed and wonder whether my senses were not leaving me. The very title compelled me to stare in incredulous amazement; slowly and with plodding difficulty I made it out, but beyond question I deciphered it correctly. "Manual of the One-hundred-and-twenty-third Century!" it said. "Manual of the One Hundred and Twenty-Third Century!"—and, in accordance with this astounding title, the book embodied a description of life in the year 12,201!

COULD it be but an imaginative forecast? I asked myself, in a daze. Was it not the work of some daring fictionist who had perspicaciously plunged into the future? Or could the explanation be that— Here I was startled by a thought I scarcely dared phrase even to myself; a weird suspicion, which had haunted me ever since my awakening, was taking increasing hold of me. But no!—it was impossible!—doubtless I had slumbered a long, long time, much longer than I had believed—but ten thousand years!—it was a figure too gigantic to regard seriously!

Yet it seemed equally difficult not to regard it seriously. The strange towers in which I was imprisoned, the transformation in language, the curious physique of my captors; above all, the alteration of the landscape and the shifting of the constellations—how account for these except by the passage of ages?

Again, must I disbelieve the clear and emphatic words of my tutor? For, when I questioned him, he only nodded gravely, and confirmed my suspicions.

"What year is this?" I asked, picking my words with difficulty, after turning from the provocative "Manual."

He looked at me with unmistakable surprise, but did not so much as smile.

"The year 12,201, of course," he returned, with unequivocal distinctness.

Still skeptical, I bade him repeat his answer; then I requested him to note it down on paper.

"12,201 A. D.?" I demanded, when there no longer seemed any chance for doubt.

"A. D.? I do not know what you mean?" he replied, with a scowl. "Simply 12,201, by the old method of reckoning. We date our era from some ancient mythological character, who lived more than twelve thousand years ago. His name, I believe, was Christian—or Christus—or something of the sort."

These words I did not fully understand at the time. All that I realized was that a hundred centuries had apparently passed while I slept—and that was a thought



As soon as our machine had halted, my companions leapt out without wasting a second. One of them unceremoniously slung me upon his back, and all started along the platform toward a brightly lighted doorway glaring in the side of a building a few hundred yards away.....

sufficiently solemn to occupy me to the exclusion of everything else.

Gradually it began to seem to me that, after all, such an occurrence was not incredible. Suspended animation is a thing not unknown to nature and to man: the hibernating bee lives in such a state for months on end; the spider, paralyzed by the wasp, remains alive for indefinite periods; human sleepers have been known to be unconscious for many days. Assuming that the normal functions were suspended, as mine were, so that there was no output of energy; and assuming, moreover, that the subject has been removed, as I was, from the light and air and all everyday influences, there is no limit to the term that might possibly have passed in dreamless slumber; ten thousand years, or even a hundred thousand, would not be impossible, for time passes without its usual accompaniment, change. I understood now what had happened to me: I had been buried alive, and was immune to dissolution, owing to the drug I had absorbed; and I had remained so until, in the course of millennia, my clothes and my coffin had been wholly dissolved. Then slow changes in the conformation of the land had brought the sea close to my graveyard, had caused the earth about me to give way, and had made me fall over the cliff into the open, during a sort of miniature convulsion of the earth. Doubtless it was the shock of the upheaval that had counteracted the waning effects of the drug and restored life to my torpid senses.

All this, I must admit, appeared plausible enough to me when I regarded it rationally; none the less, I had difficulty in adjusting myself to the thought that the world I knew, the life I remembered, the men of my acquaintance, and the very home in which I had dwelt, could be viewed only across an abyss of ten thousand years. In that time, so much must have happened, so many men must have been born and died, so many wars must have been waged, so many nations created and submerged!

But it was the personal changes that affected me most. Above all, I found it impossible to believe that my wife—she whose high-pitched, rasping voice still haunted my dreams—was sundered from me by unthinkable centuries. Why, she had been dead for ages—and I had been bereaved without knowing it! Over a chasm of a thousand decades, I could look upon her without animosity, and even with compassion, for certainly her life had not been happy. I must confess, however, that I felt no lingering regret at the thought that she had been so long in her grave. In fact I even experienced a certain exultation, a glad sense of new-found freedom.

At the same time, I made a fervent vow, that, having once been released, I should never again assume the chains of matrimony—a vow which, as the reader shall learn, I was to forget utterly before many months.

## CHAPTER VI Trial and Judgement

MY last lingering doubt as to what had befallen me was dispersed by the "Manual of the One Hundred and Twenty-third Century." Certainly no romanticist could have imagined future conditions in the detail with which this book presented them; no romanticist could have described so accurately the scenes I had actually viewed. It scarcely mattered that I still deciphered the contemporary script with painful slowness; I had nothing except the books to occupy me during my long hours of imprisonment, and so, as the days went by, I managed to plod my way through page after engrossing page.

And what amazing discoveries I made! What astonishing glimpses of contemporary life! What fantastic panoramas lay open before my eyes! I cannot begin to repeat all that I read; yet one or two things must be reported if my curious experiences and adventures are to be understood.

First of all, as to the organization of life in the One Hundred and Twenty-third Century. During the course of ten thousand years the human race had been totally transformed; extreme industrial specialization, aided by deliberate eugenic measures, had resulted in the differentiation of mankind into four distinct species: first and foremost, the Political-Financial, of which Wolf-face was typical; secondly, and much less abundant, the Intellectual, or large-headed; thirdly, and most numerous of all, the Laboring, or small-headed; and fourth and lowest, the Military, a development from the small-headed, represented by the automatic guards who had admitted Wolf-face and myself through the doorway from the aviation platform. All these species were kept distinct, and intermarriage was forbidden; whenever a hybrid appeared, it was instantly put to death as illegitimate; and reproduction even within a species was regulated by a system of state supervision, so keeping the various types "pure."

All this was to prove of vast interest to me later; but for the present, more concerned about the general social organization, I skimmed over the sections regarding the marriage system, which, I thought, could never apply to me, and hastened on to read about the standards of the age.

"THE ideal of modern life," I was informed, "is that of the ant-hill. Our aim is to produce that specialization of physique and function which we find in the best organized insect communities. The trend of all human evolution has been in this direction, and the intelligence of man has deliberately accelerated the process. In accordance with this standard, all the inhabitants of our land, with the exception of the five per cent required for agriculture, mining, marine engineering, and the like, are required to live in vast covered cities, the equivalents of enormous hives; they are compelled, like the ant and the bee, to labor for the public good, and to conduct themselves as the central authority commands; and, since our government is a pure Financial Democracy, all members of the lesser species must at all times be ready to serve the Political-Financial class.

"Here, of course, one will note a point of superiority to the insects. And other points of superiority are not hard to find; one may observe them in the Sunlight Accumulators, which cover the roofs and streets of the cities, converting the light of day into electricity to run the wheels of industry; in the Monoxide Masks, which alone make it possible to live on the lower city levels, owing to the poisonous exhaust fumes of our vehicles; in the Ear Regulators, which adapt our senses to the tremendous din of horn and wheel; and in the Emerald Glasses, by which we have checked the epidemic of blindness which formerly afflicted city dwellers because of the perpetual artificial street-glare. No insect communities, it need hardly be said, possess such devices; and in these respects we are unquestionably more advanced than the insects. Clear-sighted men admit, however, that we have not yet attained their height of perfection in all respects; we have not secured the perfect subordination of the individual to the mass; we still occasionally find atavists, principally among the large-heads, who wish to act for themselves, even to think for themselves!—and the suppression of these unnecessary individuals constitutes one of the main problems to be solved for the achievement of our ant-ideal."

How standards have changed during the last few thousand years! I thought, as I read these paragraphs. No doubt I was hopelessly primitive in my point of view—something of an old fogey, I might have been called—for I could not adapt my outlook to that of the hundred and twenty-third century. None the less, I did find much to applaud in the system of my captors. I thought it marvelous that they had learned to regulate the country's weather, even though their indoor lives made weather changes unknown to the average citizen; I considered it remarkable, likewise, that the two upper species had been able to live exclusively upon capsule food for centuries; but, most of all, I held that the division of labor was a wonderful attainment. What an admirable partnership one observed in the performance of public duties!—the upper species did all the ruling for the people, as well as all the money-making; the intellectual species did all the thinking, though they were permitted to think only for others, never for themselves; the laboring species did all the manual labor and the military species, assisted in case of need by the other small-heads, did all the dying whenever a war was declared.

Such was, in essence, the leading information that I derived from my "Manual." But I was to have other sources of instruction, of a more direct and vivid nature—it was not long before I gained astonishing knowledge from astonishing and painful experience.

For a number of weeks—how many, I scarcely knew—I was kept prisoner in my cheerless little room, occasionally being permitted to stroll along the corridor for exercise but otherwise never allowed to vary the monotony of my confinement. For food I had nothing but capsules in water, which were served half a dozen times a day; and this will perhaps explain why I became emaciated and weak, and felt like one ravaged by fever. It may be surmised that I was furiously anxious to escape, furiously anxious for change, any change; but neither my tutor nor any of the small-heads would state when I might be freed; and there were times when, in despair, I wondered if my moment of release would not be my moment of decease.

Yet the longed-for change finally did come—and it came with a suddenness that left me gasping and bewildered.

From time to time my tutor, though usually uncommunicative, had expressed his satisfaction with my linguistic progress; and the day arrived when he came to me with every sign of pleasure, and declared, "My labors are now at an end. You have acquired a knowledge of our speech. The time for the trial is here."

What "the trial" might be I did not know; but I was not long kept in doubt. When my tutor returned on the following day, he was not accompanied merely by his small-headed servant; he appeared amid a delegation of not less than four or five particularly learned-looking and particularly dwarfish large-heads, among whom I thought I recognized one or two who had visited me before.

**S**OLEMNLy these imposing individuals invaded my room, assisted by the inevitable small-heads; solemnly, with the aid of their brawny companions, they seated themselves cross-legged upon the floor; solemnly the leader of the party bade me take my place among them; and slowly, and with momentous air, a small-head passed note-paper to all who would accept it, and my tutor turned to me by way of explanation.

"It is time," he informed me, "that we learn who you are and whence you come. When we first observed you on the sea-beach near the Wave Conversion Electrical Power Works, we could not imagine who you

might be; for men of so primitive a type have not been known for thousands of years—with the exception of a few survivors on a tropical Pacific island, who chanced to escape the tides of civilization and progress. Our surprise at your naked condition and at your antique-looking form and face was only increased by the scientific tests, which proved you to belong to a species midway between man and the apes; but some held that, despite appearances, you were more human than bestial, and that all you needed to bring out your human qualities was education and a civilized outlook. Accordingly, we have instructed you in order to test their theory, and also to hear from your own lips the story of your origin."

With a grave smile my tutor finished; and with a flourish one of his companions flung open a huge relief map of the world. "Our belief is that you come from here," he said, pointing toward the South Pacific and indicating the island of Borneo. "The only thing we cannot understand is how you could have come so far——"

But my laughter cut him short. And he and his fellows looked surprised and offended as I declared, "You are entirely wrong. I do not come from far away—at least, not far away in space——"

"Pray then, where do you come from?" demanded my interlocutor, as if begging polite leave to differ with me.

And while three or four pens raced furiously across the paper, I slowly made reply, "I do not come from far away in space, but from very far in time. I come from the twentieth century."

"The twentieth century!" responded a chorus of astonished echoes. And my hearers all gasped, then broke into a mirthful uproar.

"Yes, from the twentieth century!" I repeated, angered that they dared to doubt me.

But my insistence only confirmed the incredulity of my visitors. One of them motioned toward me and tapped his forehead significantly, and the others all nodded agreement.

"The twentieth century—let me see now," said one, venturing as near the facetious as was possible for a large-head. "That would make you just a trifle over ten thousand years old. A good old age, to be sure!"

And once more general laughter shook the room.

What could I do to convince them? For a moment I glared at them indignantly, while they seemed to be taking note of my every gesture and expression; then, still determined, I maintained, "If you give me a chance, I'll prove that I come from the twentieth century."

"How?" came a burst of skeptical replies.

"There are many ways," I declared, uncertainly, not thinking of any way at all. And then, on a sudden inspiration, "If you'll bring me a twentieth-century book, I'll show that I can read it."

**S**TILL louder laughter convulsed the puny frames of the large-heads. The examination seemed, unexpectedly, to be developing into an hilarious affair. "He thinks there are still some twentieth-century books left!" exclaimed one of the men, rapping a fellow jocosely in the ribs. "He thinks some twentieth-century books still exist!"

And, responsive to this preposterous proposition, there was once more a rattling of gay laughter.

"Did they write books even in those early days?" one of the large-heads inquired of my tutor.

But the tutor, not seeming to hear the question, turned to me, and suggested, "If you wish, we can provide you with books from the seventy-first century."

But I disdained this offer, and an awkward silence followed.

"I'll tell you what," at length proposed one of the men, in a half-humorous manner. "If you come from the twentieth century, perhaps you can let us know something about twentieth-century life."

"Certainly, I can," I declared.

Amused smiles flitted around the assemblage while I waited, wrathfully and yet confidently, for the next question.

"Where did you live in those far-off days?" demanded the large-head, with intense mock-seriousness.

"In New York City," I asserted, firmly.

"New York City? And where may that have been?" he queried, with a tantalizing smile.

"Surely, you know!"

"How should I know the names of all those little ancient places?" he flung back, in a supercilious manner.

"But it was by no means a little place!" I assured him. "Here, give me the map, and I will show you where it was!"

Promptly the map was placed at my disposal. And without delay I designated the point where the Hudson river meets the Atlantic.

"Yes, yes, we know where that is," my questioner stated, soberly. "It is only a few leagues east of this spot. There are, indeed, the ruins of an early civilization at that section of the wilderness. Archeologists have filled a whole museum with the curious relics excavated there. What did you say the name of the city was?"

"New York!" I repeated.

"New York? What a peculiar sound!"

"Was it New York—or Newark?" inquired another large-head. "I believe I did once come across some ancient records—though of a much later date than the twentieth century—which tell of an extinct city, variously known as New York and Newark; there seems to

be some confusion on the point. Some have held that there actually were two cities, but modern research has discredited this view. It seems probable that Newark—to use the accepted form—was annihilated in the Intercontinental War of the thirty-sixth century. But of course, there can be no certainty regarding matters so remote."

Emphatically I assured the large-heads that New York and Newark were not one—but my opinion apparently made no impression at all.

Likewise, when I attempted to depict conditions of life in the twentieth century, I was greeted only with smiles and incredulous stares. When I declared that we had had an advanced civilization, with high developments in art, science, and industry, they shook their heads in knowing disbelief, for did not historians place our culture just beneath that of the Old Stone Age? And when I described the flourishing cities, the skyscrapers, the railroads, the telephones, the gigantic power plants, the intricate machinery of our era, my hearers listened with scoffing laughter, and contradicted me flatly with the statement that anthropology credited us with no such attainments. Indeed, they argued that accomplishments so advanced at so early a period would have been impossible; and this point they proved by irrefutable logic. The mind of man, they stated, had not yet developed sufficiently, and had not yet replaced instinct by reason; moreover, the human race had not yet been differentiated into species, which meant that mankind was not yet even on the



With irresistible hands, two of the small-heads seized me, stripped me of my clothing, and stretched me prone across the floor...and I had to look on almost like an aloof spectator, while the party of large-heads drew near and began to scrutinize me minutely.

threshold of progress. They did admit—somewhat regretfully, to be sure—that modern men, being descended from some one, had no doubt had ancestors in the twentieth century; but they looked upon this as a disadvantage which they had outgrown, just as they had outgrown their heritage from the ape; and they were unwilling to concede that their own “Era of Intelligence” could date back more than four or five thousand years.

Nothing that I said had any power to convince them. The more facts I reported, the more deeply they held me to be enmeshed in lies, for the more accurately I described the life I had known, the more widely I differed from the accepted historical verdict. Their opinion, sponsored by all the books of all the acknowledged authorities, was that we of the twentieth century had been savages instinctively making our first crude gropings toward civilization; and since they regarded this view as thoroughly reasonable, they would not permit reason to persuade them to the contrary. Hence my words were worse than wasted—and the only firm impression I made was that of my own folly.

**B**EFORE long it became evident that I had succeeded merely in doing myself an ill service. This fact I realized when I listened to the words by which the leader of the large-heads summarized the views of his delegation. “You evidently do not understand,” he reminded me, severely, “that you have been talking to some of the intellectual leaders of the land—men who are not to be deceived by hypocrisy or lies. The stories you have been telling us are too absurd for serious consideration; your imagination is good, but your skill in deception is exceedingly limited; we are not so childish as to believe that the aborigines of ten thousand years ago had foreshadowed modern advances by inventing ships that would ride through the air and boats that would dart beneath the sea, nor by regulating the workers by standards of brain suppression, nor by waging war according to principles of Multiple Destruction. No, you have merely imagined all this, as well as the still more ludicrous tale of your great age. We know very well that no men can live more than two hundred years; and we know equally well that you must have come from the island of Borneo, though you will not tell us how. Consequently, we must sentence you to a punishment befitting a native of that uncivilized realm.”

The speaker paused, his features puckered into a ferocious frown; and the silence brooding round him reminded me of that in a court-room when the culprit is about to be delivered to justice.

“And what may that punishment be?” I ventured, in faltering accents.

“What? You pretend not to know?” The speaker’s frown was graver than ever. “Have you not heard what happens to your countrymen that defy us?”

“I have no countrymen!” I protested.

“You may have the chance to rejoin some of them very soon,” proceeded the large-head, regardless of my statement. And then, turning to several of the small-heads stationed statue-like against the wall, he directed, “Men, you will conduct the prisoner to the Insect Basements, and see that he is assigned to duty according to Routine Schedule Number 4. His conduct gives us no other choice, and apparently he is fitted for nothing better. In case he revolts, use proper disciplinary measures; meanwhile, take these instructions to Section Commander 457.”

And my judge scrawled some hieroglyphics on a sheet of notepaper; then, having folded the document and passed it to one of the small-heads, he leaned far back with a self-satisfied expression, and commanded, “Go!”

The next instant, I had been seized by the small-heads, flung struggling to the shoulders of the tallest of the band, and borne helplessly from the room down the vague, sloping reaches of an interminable corridor.

## CHAPTER VII

### The Insect Basements

**A**FTER descending for many minutes along narrow winding galleries at a steep incline, the small-heads paused before a huge iron gate bearing the legend, “Insect Basements: no admittance without pass.” From within I thought I could hear a curious sound, a confused murmuring as of innumerable far-off complaining voices; but when, after a minute’s delay, the portals began to swing open, the murmuring was magnified to a sort of shrieking, a strident uproar as of rock-drills and trip hammers; and I had to be supplied with ear-protectors before I was able to endure the din.

A row of the military small-heads stood ranged within, their long lances glistening in the electric glare. They greeted us with automatic gestures; with automatic gestures their leader glanced at our admittance cards; in their movements was the precision of a pendulum as their lump-like heads swayed from side to side, from side to side, to signify that we might enter; while, once we had passed, their figures hardened instantly into the rigidity of statues.

We now proceeded slowly through long columned aisles, lighted brilliantly from a ceiling a hundred feet above. On all sides, looming in some cases to the full height of the hall, were barricaded compartments and cages of glass or closely woven wire, some covering several acres, some no larger than an ordinary room. But, how astonishing the contents! I gaped and gaped, and could scarcely accept the testimony of my own eyes—had I been transported to the depths of a nightmare? Or was I drunken? or did I see things in delirium? Surely, this hall had been well named the “Insect Basements!”—but were those actually insects that I beheld swarming in the numberless cages? In form and color they were insects indeed!—but in size they scarcely seemed so at all!—rather, they seemed like infant monsters from some earlier and grotesque age. Though some were no bigger than new-born kittens, yet many were as huge as rats, and a few were larger than rabbits.

Never, in my most distorted dream, had I imagined creatures so hideous and terrible. Consider, for example, the appearance of a flea through a microscope, a creature with long hairy crab-like tentacles and a goblin face—and think of this monstrosity as standing serenely before one the size of a bull-frog, then vanishing with a leap as of a projectile hurled from a cannon. Or picture a spot swarming with black beetles as long as one’s forearm, which crowd upon one another in riotous confusion and sweep back and forth at the speed of running ten-year-olds. Or, again, conceive of bumble bees as large as robins, which wheel through the air with a whirling as of a buzz-saw; or, yet again, fancy a cobweb that looks like a diaphanous hammock, except for the spider stalking in the center with long legs spread twenty inches apart. What flies, and what crickets, and what gigantic bugs I beheld!—what caterpillars that looked like serpents, and yard-long centipedes with their ugly writhing legs, and three-foot scorpions with lobster-like claws and long uplifted venomous tails! It would not be correct to say that I viewed only insects, for every terrestrial invertebrate, if sufficiently loathsome, seemed to be represented; and the more unsightly the creature, the more numerous;

while only the things of beauty, such as the butterflies and colored moths, appeared to find no place in this most ghastly of all menageries.

Such, at least, was the impression that I received as I was borne slowly along those horrible aisles, gazing in mingled amazement and disgust at the swarming occupants of the cages. What was the purpose of these huge insects? And how did they come to be so large? As I gazed at them, I recalled the colossal grasshopper I had viewed on the sea-beach. Could all insects now be of giant size?

But my reflections were rudely cut short.

Suddenly, from some unseen person far down the aisle, there came a terrific scream; and instantly, bristling like frightened cats, my companions halted. For a second they peered anxiously about them, then gave terrified screams in reply. "The ants! the ants!" they cried. "The ants! The ants! The ants have escaped!"

And my bearer flung me without compunction to the floor, and joined his fellows in headlong flight.

PICKING myself up, half stunned, I went dashing after them, my heart palpitating wildly. But my legs, long unused to exertion, were not equal to the strain; I lagged far behind; soon I had almost lost sight of the small-heads; then, while alarm rose and rose within me and I struggled on frenziedly, I heard from behind me the pattering of small footsteps.

Almost at the same time, I felt something clutching at my ankles; then pain cut sharply through my leg, as though a sword had lacerated me; then came another lashing pain; and, panting and out of breath, I gasped, tottered, and was about to fall—

But from somewhere behind me a hand reached out, and seized me, supported me. I still staggered, but remained on my feet; before my eyes there was a mist; to my nostrils came an acrid odor that was fairly overpowering.

"Those Amazon ants—we never can keep them caged," I heard some one saying. "Lucky I happened to be near with the asphyxiating fumes."

There was something singularly agreeable about the voice; it had a soft and soothing tone that contrasted strangely with the buzzing of the insects—a tone such as I had never heard before among my captors.

Gradually, as my bewildered senses returned to me, I became aware that a gracious-looking blue-eyed young woman was regarding me curiously and yet sympathetically.

"I got here just in time," she remarked, with a smile, as she swung a steel cylinder marked "Asphyxiating Fumes," and pointed to the prostrate forms of a dozen six-inch ants, whose bulldog jaws and sickle-like-toothed mandibles impressed me as anything but amiable-looking.

"We are safe for the present—they will not revive for an hour," she continued, pointing to the smitten insects. They're always—"

She broke off, as if startled; then, in horror, added, "Look! I wasn't in time! They've already nipped your ankles!"

And she pointed to where the blood was flowing from a gash two inches across.

BUT the wound troubled me only slightly. I was thinking that it was worth being nipped in order to meet so delightful a person. She impressed me as the first real human being I had met since leaving the twentieth century. Unlike most of her contemporaries, she was neither a large-head nor a small-head; everything about her appeared in perfect proportion; her limbs, vaguely outlined beneath her one-piece coarse

hempen gown, seemed neither underdeveloped nor overdeveloped; her eyes sparkled with a light that was clear and limpid, although sorrow seemed to brood somehow beneath the merriment.

Promptly, upon discovering my injury, she reached into the folds of her garment, and drew forth some surgical appliances, with which she deftly bound up my wound.

"This is against orders, you know," she assured me, with a smile, as her skilled hands stanching the flow of blood and applied the bandages. "If the Section Commander should learn of it, I would be disciplined for using initiative."

As yet I did not quite understand the import of this; but I smiled happily in reply, for I thought I had rarely seen anything more ingratiating than her sensitive, firm-modelled face, with the black hair tumbled strikingly above the deep blue eyes.

"Have you been sentenced to the Basements, too?" she inquired, in a tone that bespoke pity but not entire regret. "They seem to think that is all our people are good for."

What did she mean by including me among "our people?" I did not know, but was far from displeased. I had just opened my mouth to frame a reply, when a raucous voice from my rear crashed upon me like a blow. Instantly a pallor came to the face of the blue-eyed one, followed almost at once by a flush; then, recovering, she cast me a twinkling smile, turned on her heel, and was lost to sight in a side aisle between two glass cases.

Wheeling about in dismay, I faced an approaching party of small-heads.

Sullenly they strode up to me—I recognized them as my companions of a few minutes before. "What did you mean by trying to get away?" growled the leader, giving me a painful cuff by way of reprimand. Then, seeing the disabled ants, he bade one of his men gather them in a sack and bring them to the keeper.

As for myself, I was straightway lifted again to the shoulders of the tallest small-head, and borne away through the limitless corridors.

A few minutes later, we arrived at an open space, dominated at one side by an imposing and fantastic structure that defies description. Its size was enormous, for it reached to within a foot of the ceiling; its shape was like that of a mountain, for it was marked by a gigantic irregularity; it was composed of a sharp-pointed central spire of a hard clayey substance, surrounded by a multitude of small spires equally sharp-pointed, but no two of the same height, and no two separated by the same distance from their fellow spires. A more extraordinary piece of architecture I had never viewed, and I could not imagine its purpose, until, at one side, I saw a sign, "Termitarium 29." Then I knew that this must be a nest of the termites, or "white ants."\*

Before a cement cabin in the shadow of the termitarium, my companions halted abruptly. Then drew themselves up in rigid military formation, silent as though preparing for an ordeal; then slowly their leader stepped forward, and gravely pulled the knocker upon a door that read, "Main Division Office. Section Commander 457."

In another moment we had been escorted into a bare-walled waiting-room equipped with a steel desk and benches. Its only occupant, with the exception of half a dozen of the military species, who stood motionless

\* The "white ants" are only so called on account of their resemblance to the true ants; they are not related to them. They belong to the order Isoptera (Equal winged) and to the Termite family. But the name "ant" is always applied to them in ordinary usage.

against the wall, was a small boy of about ten years, who disported himself on the floor with the strangest playmate that ever a child possessed: a black and red beetle a foot in length! To me, the creature seemed singularly repulsive, with its long waving antennae, its jointed legs armed with spike-like protuberances, its beady eyes staring from the anvil-shaped head; yet the child apparently regarded it as a pleasant pet, and fondled and caressed it and even spoke to it softly, as if it were a kitten or a dog.

"The Section Commander's son!" I heard one of the small-heads mutter; and he bowed respectfully to the boy.

Just at that moment a door swung open; and the small-heads, with terrified haste, all flung themselves prostrate to the floor, and began to bump up and down mechanically. And while these antics were being performed, a wolf-faced woman entered on tottering, puny legs, stationed herself at the desk, and rapped sharply for order.

Abruptly, with the manner of intimidated children, the small-heads shot to their feet. Their leader approached the newcomer obsequiously, addressed her deferentially as "Section Commander," and passed her the note from my large-head judge.

Not the hint of a smile flitted across her cold, stern features as she glanced through the contents. But there was a cruel light in her greenish eyes as she turned to me, and declared, "You are to be assigned to Routine Schedule Number 4. I suppose you know what that means. If not, you shall shortly find out. It is the punishment we reserve for the hypocritical, the rebellious, the untruthful. I shall post you as a sub-keeper of the insects in Department 54; the length of your service shall depend upon your conduct, though personally I disapprove of all weak-kneed lenience, and favor a minimum term of five years. Sentences for life, as you must be aware, are not uncommon, though of late they have been opposed on grounds of hollow sentimentality. . . ."

THIS and much more the Section Commander spoke in a shrill, grating voice, yet with a judicial impassiveness that made me long to throttle her, woman though she was.

Could she mean all that she was saying? Must I actually be imprisoned in these insufferable Basements? Must I be for years a keeper of the monstrous, swarming vermin? It seemed a fate too bitter to be possible; yet that it was to be my fate became increasingly evident as the Section Commander proceeded with her harangue.

"Before assigning you to duty," she continued, with the machine-like fluency of one who repeats by rote an often-told tale, "I must impress upon you the high importance of your work. You are no doubt aware that, ever since the extinction of the last of the birds and quadrupeds in the Third Bubonic War of the eightyninth century, insects have assumed an increasingly important place in our lives. You know how insect-fanciers have arisen, cultivating all varieties of bugs, ants and beetles, and improving their size by selective breeding, much as the men of a former age improved the size of fruits and flowers; you realize that, for countless generations, insect-breeding was a fad, the distraction of scientists and the hobby of men of leisure, though it served little real purpose except to provide parlor ornaments and pets for our children. But you understand how, in the so-called War of the Malarial Germs, which war convulsed the latter half of the one hundred and fifteenth century, the great military genius Micopo discovered the practical importance

of insects in warfare, and utilized gigantic mosquitoes to spread malaria throughout an entire continent. Since that time, of course, we have advanced far beyond Micopo's comparatively innocuous measures, and to-day all of the three great nations of the world regard insects as their most powerful instruments of offensive warfare. Hence the importance of the Insect Basements. While not a few of the superfluous creatures bred here are sold from time to time to insect-lovers, the majority are retained for service in the next war; therefore you must keep before you at all times your obligation as a patriot to sacrifice everything on behalf of your charges, and even, if necessary, to die for them. Need I add that any remissness in the performance of duty will be suitably punished?"

The speaker paused, scowling prodigiously upon a small-head who had had the poor judgment to yawn. Then briefly she concluded, "Men, see that the prisoner is taken at once to Department 54. And have him installed immediately in his duties."

And once more I was lifted to the shoulders of a small-head and carried away. But as I passed through the doorway I heard again the voice of the Section Commander. "Child," she was admonishing her small son, "don't you think you've played long enough with that beetle? It's a silly, effeminate creature, fit only for girls. I've got a nice little wasp, with the sting removed. It should suit you much better."

But the wailing of the child, "I want my beetle! I want my beetle!" rang out as the door closed behind us.

A FEW moments later, I had entirely forgotten the Section Commander in contemplation of my new duties. Arriving at Department 54, I was placed under the immediate charge of a gruff and burly small-head, whom his fellows addressed obsequiously as "Sassun."

Our relationship, I am afraid, did not start propitiously, for he acknowledged the pleasure of making my acquaintance by cuffing me soundly on the ear. Then, while his fellows laughed at this humorous display and stood by to watch and applaud, he seized me by one arm, and half pulled, half led me to my place of work.

It was with no pleasure that I beheld my future field of activity. I was assigned to the charge of four cages—four cages, of which each was filled with its own distinct variety of horror. The largest and most interesting of them all contained the home of a species of red wood-ant, which grew to a length of four inches and boasted a hill twelve feet high; and the agile and swift-moving insects, as they flitted in and about among the rocks and cleverly contrived imitation shrubbery, filled me with a dread and dismay not mitigated by memory of my recent wound. But they repelled me less than did the inhabitants of my second cage—stinging flies each the size of humming-birds; nor did I find them in any way more repulsive than the three-inch potato-bugs and the five-inch cockroaches that were also in my care.

"You are to see that all these creatures are well housed, watered and fed," stated Sassun, with a menacing frown. "You are to go twice daily into each of the cages, with food with which I will supply you—"

"Into their cages?" I echoed, with a sinking of the heart.

Sassun glared at me as if uncertain whether to cuff me for the interruption; then angrily continued, "Yes, you must go into their cages. You will be protected, of course, by a steel coat of mail and the asphyxiating fumes. As for the rest of your work, you must see that the insects do not escape, and that they do not devour one another; also, that they are properly ex-

hibited, that their health is cared for and their cages kept at the proper temperature, and that they are not annoyed by the visitors. Simple enough, isn't it?"

I acknowledged that my work was simplicity itself. "Now I will assign you to your sleeping-quarters," Sassun proceeded. And he led me down a flight of stairs to one of the dingiest cellars I have ever had the misfortune to behold. In the vague windowless gloom, I could make out rows of mattresses resting on the floor, and I was dimly aware that I had been assigned to number 18.

But, above all, I took note of the concluding words of Sassun.

"Everything down here has the latest conveniences. Though five hundred feet below street level, we do not need the monoxide masks. A constant supply of oxygen is pumped in for the benefit of our charges; the Basements, unlike the city streets, have to be kept free of monoxide exhaust, which would kill the insects. A further advantage is that we do not need the sunlight; we have super-maximum sunlight from our hyper-electric cylinders."

In order to illustrate these words, my keeper switched on a light which, for an instant, half blinded me, but which only served to accentuate the wretched appearance of the long, unadorned room, with its bare mattresses sprawled beneath the low ceiling.

"We also have summer heat constantly—a steady temperature of eight-eight degrees," continued Sassun. "Superior to nature! Tests have proved that that is best for the health of the insects."

All in all, I began to envy the insects. Oh, that I might exchange these miserable lodgings for their capacious ones!

"As for food," resumed the overseer, "I shall provide you every day with capsules and water. You will now come up with me, and I shall give you your cage clothes and let you start work."

And we mounted to the insect level, then made our way to the small cement cabin where Sassun had his headquarters. As we entered, I stopped short with a sudden delighted tremor—ambling past the hut, and smiling deliciously in my direction, was one whom I recognized with a rush of joy. It was the lady of the bright, blue eyes!

"Here! What are you halting for?" cried Sassun, all his gruffness returning. And with a ferocious lunge he pulled me into the cabin.

But I paid little heed to his brutality. Eagerly I glanced through the doorway toward a lithe, retreating form. And despite the insects, despite Sassun, despite my sentence of imprisonment, I exulted. The blue-eyed one was working not far from me! I should see her, I should surely see her again! And who knew what happiness might not follow?

But at the same time a shadow flashed across my mind. What had she done to be imprisoned here? Was it that she too had tried to deceive the large-heads?

## CHAPTER VIII

### Luella

WITHIN a few days I had become accustomed to the routine of my work. And I had learned to do everything with a mechanical regularity that must have made me seem akin to the small-heads. I had never seen a place where everything was done so scrupulously according to schedule as in the Insect Basements; there was a time for doing everything, and consequently no time for doing anything one wished; there was a second fixed for rising, a second for commencing work, a second for quitting work, a second for

using one's prayers, a second to begin sleeping; and on alternate Sundays there were several seconds reserved for thinking. But to vary from the prescribed monotony was an offense certain to bring its punishment. An enormous gong, which resounded throughout the entire place like the peal of the bells of judgment, aroused us in the morning; to the thunder tones of the same gong we consumed our capsules and water; at the third summons, we marched in military formation to the insect cages, clad in steel mail and armed with asphyxiating fumes and thermometer; then, entering the screened or glass compartments, we took the temperature and recorded it in notebooks provided for the purpose; following which, at the orders of the same gong, we retreated from the cages and went to secure breakfast food for our charges.

During the first day or two, as might have been expected, I was not without my little troubles. Despite my defensive armor, I could not adjust myself to the idea of letting five-inch vermin swarm all over me; and I could not enjoy the sensation of hearing huge flies buzzing past my ears with a deafening whirr and from time to time colliding with me full-tilt. Again, I did not appreciate the way the small-heads laughed when they saw me diffidently entering the cages and hastily leaving; nor could I join in their merriment one morning when, my armor being ill adjusted, a stinging fly stabbed me agonizingly on the neck, leaving a swelling the size of a hen's egg. I particularly deplored the latter incident because Sassun, learning of my misfortune, reprimanded me for negligence instead of offering a little badly needed sympathy; and my love for him did not improve when, having buffeted me soundly, he threatened to have me brought to trial for contempt of duty the next time I showed a similar incompetence.

The only variation in the routine occurred upon the admittance of visitors—or, rather, prospective insect-purchasers. These, who in nine cases out of ten were of the so-called "gentler sex," invariably belonged to the upper or wolf-faced species; and they showed every sign of their privileged position as they sat majestically in their little three-wheeled chairs, pushed through the long corridors by obedient small-heads whose very existence they seemed to ignore. The more I saw of them, the more I loathed them; their cold glittering greenish-gray eyes, their toothless mouths and sharp canine profiles, their manner of bold assurance and impudent command, made me think them the most detestable creatures I had ever met.

But I was repulsed in particular by the ornaments they flaunted—and by their odd headgear. Just as fine ladies in the twentieth century wore birds of Paradise and other exquisite objects in their hats, so the women of the wolf-faces exhibited dead and stuffed insects—great grotesque spotted beetles, green plant-lice of the size of bumble bees, embalmed dragon flies and desiccated crickets and locusts. But these did not always retain their natural coloration; in many cases, they were stained all the hues of the rainbow, were brilliantly polished and lacquered, were pierced with golden clasps and pearl-studded pins—and that they were regarded as objects of beauty was evident to me when I saw the women showing one another their dead grasshoppers and tarantulas and exchanging compliments and murmurs of admiration.

ONE party of these unusual women—a party numbering about half a dozen—did me the honor to stop at my cages and inspect my wares. Sassun, who no doubt had had advance warning of their coming, was solicitous in his attention; and to judge by the courte-

ous and even deferential manner with which he received them, one would have known them to be ladies of high degree and would have thought him to be a mild-mannered and exemplary individual.

"Yes, madam, we have a few surplus ones on sale," I heard him suavely remarking, as he approached my cages. "Ants are in season just now. We have some fine red ones, which will do well on a hat, not to speak of adornments for one's bodice."

"Oh, I don't know," breathed one of the women, languorously. "It's such a problem. There have been so many ants worn of late. Besides, I'm afraid they'll be going out of style before long."

"No, no, madam, ants are always fashionable," my keeper assured her. "Of course, if you prefer lady-bugs, or black spiders, or nice green flies—"

"Well, you might let me see a few," conceded the languorous one; whereupon Sassun turned to me and commanded, "Number 18, go catch me a good healthy ant."

For a second I hesitated, though it was easy to see that it would not be politic to argue.

"Very well, sir," I agreed; but it was with no confidence at all that I slipped on my rubber gloves and went to capture a four-inch wood-ant.

Doubtless I was very amateurish in my technique, for the women burst into loud rattling laughter as I went threshing about the ant-cage, in vain pursuit of my fasting victims. After a while, having bruised my knees and almost sprained my ankle, I managed to seize one of the elusive creatures; but only the dread of punishment enabled me to retain possession of the squirming, struggling form, which, despite its small size, seemed to have the strength of a bull terrier. It nipped me through my gloves till the blood came; had it possessed a sting, I should certainly have been badly injured. Even so, however, I managed to hold the insect, and, still wrestling furiously with it, exhibited it to my fair customers.

The lady examined it critically from an aloof distance, while her friends volunteered information as to its good points and its failings.

"No, I don't think I like that one," she decided, finally. "Let's see another, please."

And once again I had to go ant-chasing. When at last I had captured a second creature and exhibited it, it too was considered appraisingly, and found wanting; and for a third time I had to catch one of the unwilling insects.

After the fifth attempt, the lady concluded that she didn't want any ants at all. "On the whole, I think a hornet would become me better. Don't you?" she inquired of a friend, and then ordered her small-headed servant to wheel her away. And, to my hearty relief, she passed on to torment some other keeper.

But I had not yet seen the last of the incident. For my failure to dispose of any of the ants, I was again reprimanded by Sassun—which is to say that I was cuffed on the ears. On this occasion, his anger was sincere. "You will never amount to anything!" he informed me, in disgust. "No, you'll never amount to anything at all! You do not know how to sell!"

He even reported the incident to the Section Commander, who responded with a note to see her immediately. This summons of course I obeyed, though with trembling heart; and, after waiting for four hours, I was admitted to her Ladyship's presence, where I listened to a lecture on what she called "the value of salesmanship"—by which, I was surprised to learn, she seemed to mean the virtue of supplying unnecessary goods to unwilling purchasers.

MY one consolation, during these days of discouragement and misery, was the thought of the maiden of the blue eyes, and the expectation that I would see her soon again. It was some time, however, before I did set eyes upon her, and in the interval I made the pleasing discovery that she was not the only unspoiled human being in the Insect Basements. Though the majority of my co-workers were small-heads, yet here and there I beheld a man or woman with head of a normal size and limbs normally developed—persons who might almost have come with me straight from the twentieth century! Nearly all of these were lithe and tall of physique, with candid, engaging expressions; but nearly all bore on their faces the marks of suffering and sorrow, and a few seemed irredeemably bent and worn with toil. To make friends with any of them was difficult, since we were under constant supervision and lived according to a schedule which did not allow time for conversation or human intercourse. None the less, from the pleasant glances which they occasionally cast in my direction, I saw that they would have liked to be friendly; and, in my loneliness, I should have enjoyed nothing better than to make their acquaintance.

But who were these beings? I kept asking myself. How was it that they did not seem to belong to any of the four species of the present age? And what crimes had they committed to account for their imprisonment?

In due time, these questions were to be answered. And it was from the lips of the fairest of them all that I was to hear the solution.

I had been at my new duties for a week or ten days when Sassun summoned all his subordinates to a conference and announced that the government had arranged for a series of lecture courses for the benefit of the workers in the Insect Basements. Attendance was to be optional, and the only compensation was to be in the nature of an allowance of the necessary time; but we were all earnestly exhorted to be present, since those who received the benefit of the lectures were certain to advance rapidly in their work. Besides, the courses were to be conducted by some of the most noted large-heads in the land: Dr. Mulfi, famed for his researches into the endocrinology of the yellow-jacket; Professor Tor Dor, long the world's most eminent authority on intestinal parasites of the mosquito; Mulver Addle, who had bred the largest mites in the history of civilization; and last, but not least, the prince of biologists, M. Mehemmod, whose volume on "Physico-Chemical Stimuli and the Insect World," which had been a best-seller last year and was still the talk of the land, demonstrated conclusively that man was but an enlarged and glorified insect, whose mind responded to the same instincts as those of the moth and the bee, and whose soul, like theirs, was but a by-product of the impulse of reproduction.

Not less interesting than the lecturers were the subjects on which they were to discourse. These were comprehensive and interesting, and provided a wide range of choice: there were to be lectures on "The Food Supply of Beetle Larvae"; "Temperature Levels and the Dynamic Energy of the Hymenoptera"; "Dysentery among the Cockroaches"; "Wing Diseases of Gnats"; "Foot Diseases of Centipedes"; "Bacterial Contagion in the Insect World, and How to Produce it"; and other subjects of equal and even greater value.

But stimulating as were these topics, they were insufficient to lure me to the lectures. I did not enroll in any of the courses, and did not intend to enroll; to confess the truth, I was in a despondent mood, and did not care whether or not I advanced in my work. And so for perhaps two weeks the lectures were held

without the advantage of my cooperation. Then one day, when my duties chanced to bring me to the entrance of the lecture hall, I was startled to behold a well remembered blue-eyed person slipping silently within.

Thereafter it did not take me long to make up my mind. Immediately I became a convert to the ways of Professor Tor Dor and Dr. Mulfti; I not only surprised Sassun by expressing my belated interest in the lectures, but baffled him by my unfeigned delight when he gave me my card of admittance; and—odd inconsistency in one of my unfortunate marital experience!—I looked forward to my first lecture as eagerly as though the subject of "The Cultivation of the Sealy Leaf-Pest" were the most interesting in the world.

Yet my expectations were doomed to be deceived. The blue-eyed lady was not at the lecture. Throughout the course of a dreary two hours, while I sat amid an audience of small-heads and listened to the interminable verbiage of Dr. Mulfti, I kept glancing toward the door—but the awaited one did not arrive. And similarly during the second lecture and the third—what if she were not to come again at all? True, there was a certain limited interest in listening to the large-heads harangue; I was particularly taken with the address of one old and ministerial-looking speaker, who discoursed upon the theme, "Go to the ant, thou small-head!" and insisted with fluent oratory that human society would remain undeveloped until the laboring classes performed their duties with the unquestioning and instinctive obedience of workers in an ant-hill. This lecture, which was attended and applauded by none other than the Section Commander herself and later was commended editorially by more than one Political-Financial Journal, aroused my attention because it seemed so perfectly to express the popular point of view. But none of the addresses held me very closely; I alone, of the entire audience, did not stare at the speaker with wondering, though uncomprehending eyes; I alone did not wear out pencils in taking down notes as fast as my fingers would work; I alone did not trouble myself as to the meaning of the six-syllable scientific terms with which the lecturer obscured every second sentence—for me there were things of more importance in view. And for me all the lectures were failures—since the blue-eyed one did not arrive.

Or, to be more exact, the first three lectures were failures—the fourth was a glorious success. To be sure, its theme of "Swaddling Days of the House Spider" did not prove particularly absorbing—but the theme mattered not at all; hardly had I entered the hall when my glance fell upon two ravishing, well remembered blue eyes. In my excitement, I almost slipped down the long sloping aisle; momentarily, I became so confused that I trod upon the toes of a small-headed lady and almost bowled over the bandy-legged professor as he sidled toward the platform. But, surviving these mishaps, I made a dash toward a seat at the right of the blue-eyed one, just in time to prevent it from being occupied by an impudent small-head.

MY friend smiled pleasantly in recognition, and I found myself strangely flustered in returning her greeting. I stammered something or other in an embarrassed way, like the most callow of adolescents—and then silence descended.

It was she that broke the awkward spell. "I think these lectures are a bore, don't you?" she said, in the most unaffected manner, after a minute or two. "I wouldn't come at all, if my Department Head didn't wish it every once in a while. If you're absent all the time, they won't advance you, you know."

"What is the advantage of being advanced?" I asked.

"It means you can get out of here sooner, of course. You'll be sent where you can see the city streets once in a while, and—who knows?—maybe even see the sun. But why do you ask? Have you been told nothing at all? she inquired, a wondering light in her large, animated eyes.

"I've been told very little," I admitted. "You see, I got here so recently from the twentieth century—"

"From the twentieth century?" She stared at me as if doubtful of my sanity. "Then—then you're not one of our people?" was all she managed to gasp.

"I don't know who your people are," I made regretful admission. And I explained at once concerning the twentieth century, for it was painful to think that this charming creature might regard me as a lunatic.

To all that I said she listened with an intent, earnest expression. She did not interrupt, nor venture more than an occasional question; and I was relieved to observe that she did not doubt me, as the large-heads had done.

Just as I was approaching the end of my explanation, the lecture began. I could have cursed the too-punctilious professor for commencing scrupulously on time; none the less, having been lifted to the heavens, I passed a blissful hour or two even though I comprehended nothing of what was said concerning the ways of the Arachnida and had my mind occupied solely with things of a non-scholarly nature.

During all this time, my companion took notes with what appeared to be painstaking fidelity, and seemed to have become oblivious of my existence. But once, toward the lecture's close, I chanced to catch her peeping in my direction with a look half shy, half inquiring; and I was encouraged, and gave renewed thanks for the privilege of attending the lectures.

When finally the speaker had completed his discussion of the peculiarities of young arthropods\*, and when his hearers had gone trooping from the hall up the stairs to the Insect Basements, we were all expected to return to our duties in the various cages. But I had other plans in mind. "Come this way," I whispered to blue-eyes, indicating a side-aisle between the grasshopper cages; and, with a roguish glance, she followed me, while I led her in what was certainly not the direction we were scheduled to take.

Arriving at a little niche shielded from observation on the one hand by a cage of huge red and yellow beetles, and on the other by a compartment containing oak-galls the size of pumpkins, I suggested that we seat ourselves on the sawdust-strewn floor and continue our interrupted conversation.

To this project she offered no objection; and it was not many seconds before we were seated side by side, engaged in what I found to be a most agreeable tête-à-tête.

"I have told you about myself and where I come from," I began. "Now will you let me know who you are, and how you happen to be here. First of all, what is your name?"

"Luella," she murmured; and I thought that the mellifluous-sounding word perfectly became this exquisite creature of the blue eyes and dark waving hair. "What is your name?"

I felt ashamed to have to confess to a commonplace "Henry Merwin."

But, to my surprise, she did not think the name commonplace at all. "How odd!" she exclaimed, re-

\* In the animal kingdom a branch or division including insects, spiders, and crustaceans and sometimes others are comprised. The name is taken to indicate a jointed leg.

peating the words slowly, as if enjoying their rare sound. "I particularly like Henry. It has such a nice, archaic ring!"

She paused; then, with a wry smile, continued, "Down here, I am not Luella, but Number 67. And you?"

"Number 18," I confessed.

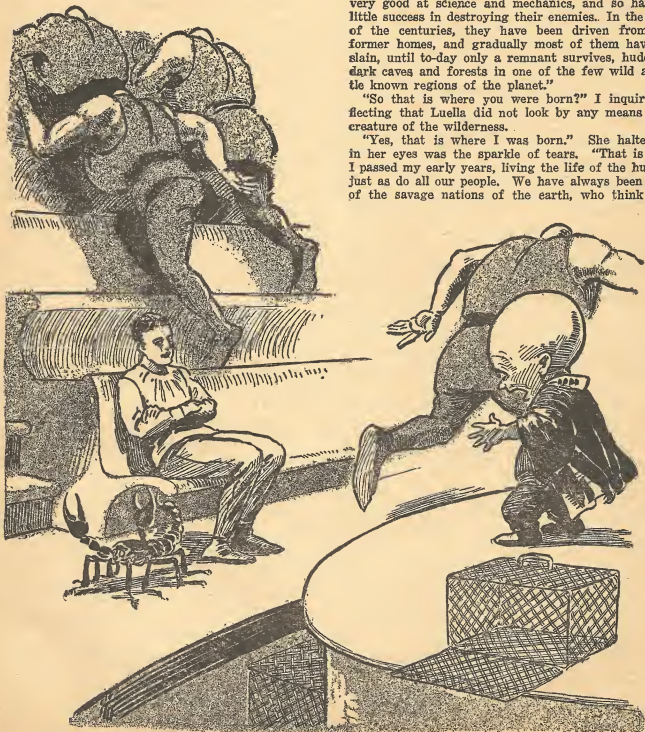
"In my own country," she proceeded, reminiscently, while her eyes held just a hint of wistfulness, "we do not number people. I come from a civilized island far, far away in the depths of a southern jungle." And she described her home in such a manner that I recognized it as being on the island of Borneo. At the same time, I remembered that the large-heads had mentioned this island as still containing a few specimens of

primitive humanity—and I wondered if she could be one of those aborigines.

IT was not long before she gave affirmative reply. "My people are not many," she informed me, speaking slowly and not without a trace of sadness. "There are only a few thousand of them left, and yet those few thousand are different from all other persons on earth. You remind me very much of them,"—she paused, and looked up at me with an approving glance—"for neither the large-headed nor the small-headed are to be found among them, and they are neither over-developed monsters nor so puny as to have lost the use of their limbs. They belong to a race which, tradition tells us, was once far more numerous, and once covered half the world; but they have been defeated time after time in war, for they have never been very good at science and mechanics, and so have had little success in destroying their enemies. In the course of the centuries, they have been driven from their former homes, and gradually most of them have been slain, until to-day only a remnant survives, huddled in dark caves and forests in one of the few wild and little known regions of the planet."

"So that is where you were born?" I inquired, reflecting that Luella did not look by any means like a creature of the wilderness.

"Yes, that is where I was born." She halted, and in her eyes was the sparkle of tears. "That is where I passed my early years, living the life of the hunted—just as do all our people. We have always been afraid of the savage nations of the earth, who think them-



Bewildered, but still only slightly frightened, I remained placidly in my seat, wondering why it was that all the adjoining chairs had been vacated. Then my eyes all but popped out of my head in the extremity of my horror. From directly under my seat there crept a fifteen-inch monster,

selves civilized because they are more numerous than we, and more skillful in killing. For the savages call it sport to shoot us down, just as if we were insects; and when they do not murder us outright they make us slaves. And so my people long ago had to take refuge in a great cave, whose entrance is hidden among the boulders of a mountain. There our enemies cannot follow us, for they have never found the doorway—"

"Then are you safe there?" I interrupted.

"If we were, should I be here now?" she returned, and heaved a sigh. "Unfortunately, we must ascend to gather food—and also, we enjoy the sunlight. But we never go into the open without dread. Every year, some of us are slain or captured by some marauding band—every year, until now our wise men say the time is not far-off when the last of us will be gone."

"But is there nothing you can do?" I inquired, noting her expression of brooding wistfulness. "Nothing at all you can do?"

"What can we do? All we have learned is how to live peacefully with one another—how to make songs and beautiful things, and care for our children and help our friends, and enjoy the sunlight and the flowers, and see that no one among us shall be ill or neglected; but we have not learned how to asphyxiate and poison. And so we are doomed to die out. That, I believe, is what the large-heads call "the survival of the fittest.""

In her tone, as she spoke these words, there was such bitterness that I thought it best to alter the drift of the conversation. "But you are not telling me about yourself," I reminded her. "How does it happen that you—"

"MY story is very simple," she confided, smiling faintly. "I had the bad luck to be one of the captured. One morning I was out gathering wild-flowers in a meadow not far from our cave entrance, when suddenly there was a tremendous buzzing from above, and before I could rush back to shelter, a huge whirling machine came down from the skies like a terrible black bug; and out of it there stepped three men such as I had never seen before. Two had heads no bigger than those of babies; and the other, with a head great enough for four, looked like a goblin out of a bad dream. I tried to run, but the small-headed ones chased and caught me; then they tied me into a bundle, and took me away in their frightful machine. They carried me far over the ocean to this city, which I had heard of already, because my people speak of it as one of the 'insect cities.' As soon as I got here, they put me on trial, in order to make me tell them where to find my people's cave entrance. And when I would not tell, they tried to force me, and finally found me guilty of disobedience, just as they found you guilty of lying; and they sentenced me to work among the insects. You will notice that several of my people are serving a similar sentence."

"I have noticed," I remarked. "How could I overlook the presence of some real human beings?"

She flashed me a grateful smile that meant more than words. "I have been here a whole year already," she resumed. "At times I have been so sad, I thought I would die, and always I have been homesick for the blue skies and the meadows and the sunlight. And I have been so lonesome," here she hesitated, and rudely wiped a tear from her cheek, "I miss my friends, my sisters, my father— To think that they don't even know now where I am!"

"Won't you let me try to take their place?" I requested, reaching forth my hand by way of comfort, but not daring actually to let it touch hers. "Won't

you let me try to be your friend? I too am cut off from all my world!"

"Thank you," was all she seemed able to murmur; but she looked at me through gleaming lids with a most kindly expression.

"Tell me, where shall I be able to find you?" I had made bold to inquire—when suddenly from our rear there came a thunderous growl. And springing to our feet with a start, we were confronted by the glowering form of Sassun.

"What is the meaning of this?" he barked, waving his fist menacingly, while an evil light shone from his small malicious eyes. "You should both be in your cages! I'll have you reported for breach of discipline!"

"But—but we were just going to—" I started to explain, haltingly.

"You, you most of all—you should be in your cage!" he cut me short. "I'll show you!"

And the world grew dark before my eyes as he lunged toward me and seized me in irresistible, punishing hands.

## CHAPTER IX

### Virtue is Rewarded

ASSUN'S spying, I am glad to say, proved less injurious to Luella than to myself, for he was not her Department Head, and in his preoccupation with my punishment, he evidently forgot to report her. He took care, however, to see that I should suffer penalties enough for two; after bruising me in a thorough-going and competent manner, he placed my name on the "Black List," as a result of which I received another note from the Section Commander, and another sermon; he also denied me the privilege of attending the next three lectures—a greater hardship than he knew!—he assigned me some extra and particularly disgusting work in the weevil cages; and for two whole days, as a final reprimand, he denied me my capsules and water.

But the latter punishment, though he did not know it, was really a blessing in disguise. For it showed me how to escape from the unpalatable fare of my captors. Feeling weak and hungry after a twenty-four hours' fast, I conceived a plan so obvious yet so practicable that I was surprised not to have thought of it before. Why not consume some of the insect food? Daily I was entrusted with many pounds of fruits and vegetables, sugar and honey and crushed grains for the denizens of my cages—nothing would be easier than to share in their banquets. Of course, the food was prepared without reference to sanitary precautions; of course, it was humiliating to be reduced to stealing from the flies and cockroaches—but hunger is a democratic master and knows no laws of caste, and I had few scruples about becoming a diner at the table set for the insects.

After a single purloined meal, I decided to eschew my capsule diet entirely. Never had I relished any repast so well; I particularly enjoyed the honey and brown bread designed for the ants, and the potatoes for others of my charges, especially the cockroaches; and I regretted not having taken advantage of my opportunities sooner. To be sure, there was one disadvantage: after I had satisfied my appetite, there was not enough left for my charges, since the daily amount for each cage had been carefully computed by an expert dietician. And if the insects were allowed to starve, would not my breach of duty be discovered? and would not a fitting punishment follow? So I reasoned; but it was only after considerable reflection that I

solved the problem—what if I should bestow my capsules upon the insects, thereby avoiding a deficiency in their food supply?

This plan seemed to me to be flawless; accordingly, after taking pains not to be detected, I placed a number of capsules in the cages with my five-inch cockroaches. I was surprised to observe that these rapacious creatures, who ordinarily would hesitate at nothing from shavings to green soap, paused a long while before the capsules, feeling them dubiously with their antennae. Some, perhaps relying upon a protective instinct, totally disdained the suspicious-looking pills, though there was no other food in sight; and they had to go hungry for the day; but a few of the bolder spirits, or possibly a few of the more famished, finally allowed their appetites to overcome their discretion and hesitatingly consumed all the capsules.

I have never thought of myself as one intentionally cruel to dumb animals, nor had I meant to be cruel in this case; but I fear that my action was sheer naked brutality. The human stomach may have become accustomed to the capsules through long centuries of training; not so, however, the undeveloped digestive system of the cockroach. At least, none of my cockroaches seemed able to endure the new bill of fare; when I returned an hour later, I found a dozen of them writhing on the floor in torment; and one or two, motionless on their backs with lifeless legs pointed ceilingward, bore silent testimony to the effects of human food.

Needless to say, I was in despair—despair that only deepened when the surviving victims, despite all my efforts to succor them, one by one rolled over on their backs and wriggled their last. Though I had never before shed any tears upon the death of a cockroach, this time I felt genuine grief—how keep the misfortune from the eyes of my overseer?

TO add to my consternation, Sassun chanced to pass my cages just as I was lugubriously regarding the corpse of the last victim. Of course, his keen eyes did not miss what had happened; his surprise was obvious, as was also his excitement. But possibly the thought of my responsibility did not enter his sluggish mind; or else he may have been deceived by the look of almost tearful regret I wore; or, again, he may have considered only his own accountability to the Section Commander. At all events, he wasted no time on the usual reprimands, but rushed off down the aisle with every sign of agitation, in such haste that he entirely forgot to cuff me as he left.

Half an hour later he returned, in the company of several other small-heads, the Section Commander, and four or five large-heads, among whom I recognized Mulver Addle and Dr. Mulfifi. All seemed much perturbed; with the air of mourners assembling about the bier of their best friend, they marched toward the cockroach compartment; and solemnly, and with melancholy exclamations, they pointed toward the defunct insects.

Then, without his usual gruffness, Sassun bade me bring forth the corpses for inspection; and when I had complied with his request, the large-heads launched into a prolonged discussion, which made it evident that their interest in the decease of the cockroaches was sheerly scientific. Owing to the long words and interminable sentences they used, I could not make out all that was said; I did gather, however, that a post-mortem upon the insects was being held, and that the large-heads were exchanging views as to the cause of death. One was solemnly of opinion that the insects had perished because of imperfect metabolism following the

excessive consumption of sugar, and recommended that the cockroaches in future be subjected to a less starchy diet; another, disagreeing, held that the protein content of the food was too high, and that what was needed was a greater percentage of carbohydrates; still another denied that food was a factor at all, and held that the fatalities were clearly due to an abnormal lowering of the temperature; a fourth admitted that temperature was undoubtedly the vital factor, but contended that it had been abnormally raised. But, despite prolonged analyses and careful dissections, not one said anything about the capsules.

Consequently, I had cause for self-congratulation when, after an hour or two, the learned authorities retreated, now in the midst of a spirited discussion as to whether acute indigestion were a common ailment of the arthropods.

And there, so far as I was concerned, the matter ended. Several weeks later, it is true, an article appeared in a scholarly paper under the heading of "Increased Mortality Among the Cockroaches"; but its meaning, as read to us by Professor Tor Dor at one of the lectures, was obscured by so many words that I could not conjecture what it was all about. I did, however, draw one salutary moral from the death of my charges: that in future I must consume the insects' food only in small quantities and discreetly, and must never, on any occasion, feed them with capsules; hence I was able thereafter to keep the mortality rate down to normal.

SOME days now dragged by without event. My existence had become pointless and devoid of interest, for, not being permitted to attend the lectures, I could not see Luella. It will be believed, therefore, that I was an eager auditor when at length the bars were withdrawn; that I was delighted even at the prospect of hearing Mulver Addle discourse upon "The Venom of the Scorpion." Would Luella be present at this lecture? I kept asking myself for days in advance. Would she understand that my absence from the preceding lectures had been unintentional?

Unfortunately, I reached the hall a trifle late, since Sassun had detained me until the last minute over some dull matters connected with the ventilation of my cages. Hence, when I arrived, the room was already full, and the lecturer had already risen and cleared his throat by way of oratorical preliminary. Hastily I slipped into the only available seat, which of course was in the most unpopular position, in the front aisle directly facing the speaker. Then, while Mulver Addle opened by informing us of the recent improvements in scorpion's poison, I began to glance furtively about the audience for a glimpse of a familiar face.

But at first no familiar face greeted me. It is accordingly not surprising that in my dismay, I paid little heed to what the lecturer was saying. To be sure, I was vaguely aware that he was exhibiting some particularly hideous scorpions in wicker cages, and even holding them up for the audience to view. "One scratch from the fangs of this creature," I remember him remarking, "and you would die in convulsions within five minutes." But even this interesting bit of information made little impression upon me; my mind was on something more attractive than scorpions; I still craned my neck to scan the assembled faces.

And at last my efforts were rewarded! Far in the rear, smiling graciously in my direction, was none other than Luella herself!

It is needless to add that, from the moment of the great discovery, I became oblivious to all that the pro-

fessor said. He might have been discussing scorpions, blue flies or the men of Mars, as far as I was concerned. Through my mind there flashed visions of future meetings with the most delightful of all creatures; and I dared to wonder whether such meetings might not be extended throughout all the coming years. By contrast with her, I recalled the wife I had left, and the recollection was not a pleasant one; though it is ignoble to speak disrespectfully of the dead, it occurred to me that fate had perhaps not treated me badly after all. I even went so far as to wonder—daring imagination of a lover!—whether I had now been widowed long enough to justify thoughts of a new betrothal; then, when I recalled how many centuries had passed since my wife's death, it came to me that no man in history had been longer faithful. This gave me something of a feeling of self-righteousness; none the less, when I pictured myself as proposing to Luella, it seemed to me that I heard Kitty's shrill protesting scream. . . .

Could it be that I had only imagined? Was that not actually a scream that I had heard? Suddenly, jolted back to reality, I became aware of a buzzing excitement all about me, aware that the professor had halted in his lecture, that breathless exclamations were issuing from scores of throats, that many faces were blanched and many excited hands pointing in my direction. I also observed that some persons were rising in alarm, that others were crowding toward the exits, that several in the rear were bolting pellmell through the doors. But what reason for all this agitation? I asked myself, still half in a daze. Certainly, this cement hall could not be on fire!

**B**EWILDERED but still only slightly frightened, I remained placidly in my seat, wondering why it was that all the adjoining chairs had been vacated. I was just about to call out to ask some one what had happened—when abruptly the truth became apparent. And my eyes all but popped out of my head in the extremity of my horror.

From directly under my seat, almost from beneath my legs, there crept a fifteen-inch monster, the first glimpse of which sufficed to petrify me with fear. It was one of the scorpions which Mulver Addle had been exhibiting! With stinging tail uplifted so that it almost scraped my knee, the unsightly creature crawled past me and down the aisle, while such terror gripped me that I was unable to utter a word.

But apparently no one observed my fright. All eyes were upon the escaped scorpion, and no eye left that creeping fury until six of the military, small-heads had been summoned and paralyzed it with the asphyxiating fumes.

I now found myself bewilderingly the center of attention. My fellow students swarmed about me with profuse congratulations; I caught many an admiring glance from the eyes of female small-heads; I was so deluged with compliments that I had no chance either to give thanks or to deny my right to praise. "Brave! Incredibly brave! I never heard of anything so bold in my life!" many a tongue was remarking; and even Mulver Addle, though usually as restrained as the sphinx itself, descended from his professorial dignity by personally expressing his congratulations.

"I shall recommend you for reward!" he promised, peering up at me from the depths of complicated spectacles that almost obscured his watery eyes. "Yes, I shall recommend you for reward and promotion! It is not every day that one of us shows your coolness, when face to face with a man-eating scorpion!"

But all the felicitations of Mulver Addle and my fellow students meant nothing to me at all. Where was she, the one person whose commendation I wished to hear? Apparently she was no longer in the room; and though my eyes searched earnestly for her amid the throng, I was to see her no more that day.

"I shall recommend you for reward!" he promised, I was to be a hero. I found little pleasure in the air of unwonted politeness with which Sassun now greeted me; little pleasure in the respectful salutations of workers who had formerly ignored my existence; little pleasure even in the note of approval from the Section Commander, and in the iron badge, made in the likeness of a scorpion, which she ordered to be fashioned for me upon the recommendation of Mulver Addle, and which thenceforth I was expected to wear upon my breast. My supposed exploit had apparently won me no prestige with Luella—and that alone was the point that counted.

There was, however, a distinct gain so far as my work was concerned—a gain which led indirectly to another and even greater advantage. In recognition of my courage, the Section Commander directed Sassun to grant me any reasonable concession connected with my daily duties; and, taking advantage of this offer, I requested to be released of the cockroach cage, which I detested more than ever since the mishap of the capsules. My wish was complied with promptly; and, in place of the cockroaches, I was assigned to a case of flies, which was installed next to the one already under my supervision.

One would scarcely have suspected that so trivial an incident would have any great effect upon my future. Yet its influence was destined to be vital. And once again the unconscious cause was Luella. No doubt I was more deeply enslaved than I knew, for otherwise should I have been so incurably absent-minded in her presence and have committed such egregious blunders? The fact is, at all events, that I chanced to catch sight of her one morning at a crucial moment—just as I was passing through the small door in the compartment separating the two kinds of flies. Instead of closing the door as the rules required, I stood gaping at her like one transfixed. I forgot entirely about flies and fly-cages as I returned her smiling greeting and watched her go gliding away down the aisle; and I was restored to a sense of duty only by a sharp buzzing in my ear, which had no sooner aroused me than it ceased.

And through the open door flitted one of the newly received flies.

**A**T first sight, this may not impress one as a calamity. But I had been severely forbidden to allow the two kinds of flies to associate, since interbreeding would ruin the experiments of the large-heads. Hence, I was panic-stricken to observe what had happened—how hope that my negligence would again be overlooked?

Of course, I wasted no time about setting off in pursuit of the truant. But a fly, when determined upon eluding one, is not an easy creature to catch; I passed a tantalizing half-hour perched upon a ladder with a long pole and net, fishing in the air for the evasive insect, which time after time came within range of my swinging snare, and time after time escaped capture by the fraction of an inch. At length, noticing Sassun approaching, I had to put an end to my efforts, lest they encourage an uncomfortable inquiry; but Sassun, though apparently suspecting nothing, remained exasperatingly within spying distance,

so that it was not until the following day that I could restore the runaway to its cage.

But in the meanwhile the damage had been done. Owing to the incubator method of breeding in vogue in the fly department, it was only a few weeks before the results were apparent. Unexpectedly, I had produced a brood of insects such as the world had never known before! Imagine my surprise one morning when, approaching my cages, I found them occupied by dozens of flies of an unprecedented size—flies with a six-inch wing spread, flies apparently as large as robins! And the biggest previously known were only the size of humming-birds!

Confusedly I asked myself what had happened; but it was only slowly that I solved the mystery. After a while I noted that the wings of the giants had a bluish coloration, like the wings of the escaped fly that had given me such trouble; I observed, also, that their backs were mottled with green, like the backs of the other flies in their cage. And the conclusion that they were a cross-breed was obvious. But why so much larger than either of their parents? I could only suppose that there was some peculiar unknown factor propitious for the mingling of species; or else that they represented one of those unaccountable freaks or "sports" of nature, which will occasionally produce a three-legged calf or a twelve-toed man.

The cause, however, interested me very little; the result was all that mattered. I was certain that Sassun, having observed the huge flies, would be in a mood to deal reprimands unsparingly; yet, since there was no possibility of concealing the damage, I tried to face my ill fortune resignedly. But once again the ways of Sassun proved incalculable. I shall never forget the happy smile that illumined his face when first he set eyes on the new flies; nor shall I forget the delighted way in which he clasped my hands and congratulated me. Actually, one would have thought I had done him a service!

"We will tell the Section Commander at once!" he exclaimed. "At once! Those are the finest flies I have ever seen! How did you do it, Number 13? How did you do it?"

And forthwith, beaming with joy, he rushed away to find the Section Commander.

In due time that estimable lady appeared; and with her came the usual committee of large-heads. Need I describe their surprise and pleasure upon observing my giant flies? Need I repeat the heated discussions they held, the prolix scientific explanations they gave, the praise they poured profusely upon my undeserving head? Suffice it to state that they officially rated the flies "Grade A" and "Extra-Super-Maximum," and, after solemn argumentation, agreed upon a zoological classification thirty-six syllables in length.

I must confess, however, that I was under some embarrassment when they turned to me and inquired how I had produced my interesting hybrid. Naively, I was about to tell the truth, when some guardian spirit intervened and warned me against so reckless a course; consequently, I assumed an air of thoughtful gravity, and replied that the process was too difficult and involved to admit of impromptu explanation; but I promised to reveal the secret at the proper time and under the proper auspices.

The large-heads received this explanation soberly, and as though it were the expected thing. They seemed not a little impressed, I thought; but they gave me no pleasure at all by assuring me that I should have an early opportunity to describe my methods and to make my discovery known to the world.

## CHAPTER X

### The Rumbling of the Storm

TWO or three days after the discovery of my fly-breeding exploit, I received another note from the Section Commander. Wondering what new damage I had done, I hastened to her office, to be received with gracious smiles and soft-worded explanations.

"We have decided to promote you," I was informed. "By virtue of your success with the flies, we will advance you to the Breeding or Experimental Department. Henceforth it will be your duty to assist in the production of new varieties of insects. To begin with, your task will be to supervise a hive of termites, or 'white ants.'"

She paused, cleared her throat, and stared at me with a sharp flashing light in her little greenish eyes. "Please do not underestimate the importance of this work, nor overlook the honor we are conferring upon you. Just now, the termites are the hope of our country. They are the insects of the future. We shall probably rely principally upon them in the next war. For we have recently made a miraculous discovery: not only how to improve their size—which was accomplished centuries ago—but how to adapt them to life in temperate regions. Formerly, as every one knows, they could exist only in warm districts; but now at last, thanks to the patriotic zeal of thousands of experimenters, many of whom have given their lives for the work, we have produced a species that can live anywhere."

She came to an emphatic halt, evidently expecting me to be impressed. But I was not impressed at all. "I do not quite understand," I blurted out at length. "I thought the termite was a small, harmless creature, blind and never known to attack man—"

"So it is!" She stared at me contemptuously, as though appalled at my ignorance. "It is that, and far more! It is the most diabolically intelligent creature that ever crawled on earth—and the most destructive insect our planet has ever known. It works unseen in the dark, yet it can demolish a castle overnight, leaving a shell that seems to be intact but will collapse at a stroke of the hand. It eats and digests wood; it knows how to work its way through metal; it organizes its workers and soldiers with a skill that is our despair; it lives in a concrete fortress that cannot be shattered without high-power explosives; it is tremendously prolific, boundlessly voracious, and as resourceful as man himself. Hence it is the ideal insect for warfare."

Still I stared at the Section Commander uncomprehendingly.

"In a word," she concluded, "it will prove more destructive to our enemies than all the super-dynamite we could manufacture. I will now assign you to a termitarium."

Thoughtfully she glanced over some papers strewn about her desk, while I, watching her in silence, wondered what value there could be in the information she had volunteered. Little did I realize the sinister importance it was to gain!

At length, turning to me abruptly, and with a condescending air, she reported, "I think I shall let you stay in Sassun's department. He tells me you and he get along so well together."

Then, slipping a bit of green paper into my hand, she directed, "Give him this. It is your transfer slip to Termitarium Number 11."

AN hour later, I found myself already installed in my new work. Termitarium Number 11 was very similar to the one near the Section Commander's office—a towering, fantastic edifice reaching scores of feet in air with innumerable spires, turrets and pointed pinnacles. No trace of its occupants was visible, for they never came into the open, but moved stealthily from place to place through covered walks of their own making. I did, however, observe a few termites in a small experimental cage—soft-bodied, muddy-brown creatures three inches long, with the shapes of distorted ants (for, though called "white ants," they were not really ants at all, and were certainly far from white). In addition to doing as I would with these captives by way of experiment, I was expected to provide the termitarium daily with large masses of the straw and dried vegetable fibres which constituted the staple food of the insects—and with this modest task, my duty ended.

And now what an improvement in working conditions! Comparatively speaking, I was free!—every tenth day, thanks to my new ranking, I was permitted to go where I would, even to leave the Insect Basements and roam through the city above! This was soon to prove important; but more important, to my way of thinking, was the fact that I could now and then steal an hour from my work without danger of reprimand. Which is to say, of course, that I had time for an occasional rendezvous with Luella.

To be sure, she did not have time for many a rendezvous with me. But more than once, while she was at work and her keeper's back was turned, I managed to steal a precious moment's interview with her; and more than once, when she was expected to be at the lectures, I induced her to slip away with me to some little nook secure from prying eyes.

How describe the sheer joy of those moments? To do justice to them, I should have to write a poem—and I was never one to wax poetical. At every meeting, the tie between us seemed to be strengthened; at every meeting, I was held more enticingly by the twinkle in those bright blue eyes. I would dream of Luella by night; I would think of her all the day; the vision of her dark hair and grave, delicate profile would haunt me as I did my work; I would repeat in memory every word she had said, would revive the very intonation of her voice, and see again the very gestures she had made, the very smiles she had flashed me—in short, it came to me that, for the first time in my life, I was in love!

And she—how did she react? Did she share in that emotion which was flooding and transforming my entire being? I did not know—but her gracious manner, her sparkling smiles, her willingness for a frequent rendezvous, all gave me cause for hope. And was not her friendliness apparent in her radiant manner? I thought that nothing could be more charming than the beaming pleasure with which she would receive me, and the sprightly gaiety of her demeanor—and I looked forward ecstatically to a future in which she would walk at my side. For how realize what pitfalls lay in our path?

My hopes were never at a higher pitch than immediately following my appointment to the termitarium. For then one day, during a lecture period, I contrived to secure a whole hour with her—and I thought I could read admiration on her face as she commended me on my bravery when confronted by the scorpion, and complimented me upon my promotion following the episode of the giant flies. Of course, I denied my right to praise, which only confirmed her belief that I was praiseworthy; then, in a moment of weakness, it oc-

curred to me to tell her the truth about both affairs, and to mention how she had been the indirect cause of my success. But something seemed to tell me that silence was the way of wisdom; again some guardian spirit came to my rescue, and snatched the revealing words from my lips; and I remained unmarred in her estimation, if slightly less veracious in my own.

I DID have the candor to confess to her, however, one problem that was troubling me sorely. The large-heads had not forgotten their promise to let me explain about the giant flies; with a detestable conscientiousness, they had arranged for a meeting at which I might describe my methods of insect breeding. Needless to say, the prospect was terrifying; I dreaded the event as I might have dreaded the Day of Judgment. But how avoid the ordeal? I knew of no way, in view of the insistence of the large-heads; accordingly, I placed the matter before Luella, pointing out that I was not sufficient master of the language to be able to make a public speech.

"Then why not tell the large-heads so?" she suggested. "Surely, they would give you more time if you explained. And—who knows?—maybe then you will never have to make the speech at all."

I thought her advice excellent—though I had no idea how prophetic were her concluding words. And, on the plea of the profundity of the subject and the extensiveness of the necessary preparation, I secured a postponement of a month.

During that month, astonishing events were to occur. Life in the Insect Basements, and among the large-heads and small-heads generally, was to be utterly transformed. Like a lightning blast, the change was to descend upon the comparative quiet of our lives; we were to be shaken by the premonitory rumblings of a storm that would grow and grow and sweep all things before it, hurling me into the maelstrom of the most staggering misfortunes and adventures it had ever been my ill fate to encounter.

To us of the Insect Basements, the knowledge of the event came with cataclysmic suddenness. Doubtless, in the secret councils of the wolf-faces, the affair had been arranged months before, and was little more startling than the enactment of a play that has been long rehearsed; but we menials had had no means of forewarning, and our surprise was complete and our bewilderment overwhelming when at last the dread announcement dinned upon our ears.

It was at a lecture by Dr. Muliff that the news was reported. I had observed that the professor looked unusually pale before the lecture; that at times he had drawn his dwarfed hand over his shiny bald pate in a worried manner, and at times had tugged absently at his graying goatee; while his bespectacled brown eyes wore a far-away expression and wandered here and there about the room in a bewildered, doubtful way. But neither I nor any one else could have guessed the reason for his agitation.

It seemed to me that, as he began his address, he displayed little of his usual confidence. "Large-heads and small-heads," said he, somewhat hesitatingly, then coughed and cleared his throat. "Large-heads and small-heads, the theme I have chosen for the lecture to-day concerns the glandular secretions of the yellow wasp. But, it seems to me," here he hesitated again, and unaccountably coughed once more, "it seems to me that, vital as this topic undoubtedly is, there is another subject that would perhaps be of closer interest. It would, indeed, possibly not be amiss to leave the field of entomology entirely for once in favor of a theme of

greater timeliness. I have, in short, been entrusted with a disquieting announcement."

"What can he be driving at?" I whispered to Luella, while the professor regarded us with an anxious glance, as if fearful of proceeding.

Luella nodded doubtfully, and I strained my ears to catch Mulfli's next words.

"I have a disquieting announcement," he repeated; then, swiftly coming to the climax, "I am afraid we shall all have to mobilize before long. A-uria has declared war upon us!"

FOR a moment a tense silence overspread the hall. Men and women gaped open-mouthed at the professor; a few murmured incoherently, but not one spoke aloud; one could have heard the dropping of the proverbial pin. It was the quiet that precedes the storm.

Solemnly Mulfli repeated his announcement.

All at once comprehension seemed to come over the entire assemblage. In a flash the spell was broken; instantly the place was in an uproar. Men and women leapt from their seats, shouting and clamoring; there was a mingling of cries of surprise, of dismay, of exultation; there was a hissing, a wailing, a cheering, low sobs mingling with yells of rejoicing; some stamped on the floor, some waved their arms uncontrollably, some beat their sides with their hands, making a loud slapping sound; some shrieked and some groaned, some snorted and some applauded—the majority reminded one of a drunken rabble at some bacchanalian fête.

But after a minute or two, some sort of order became apparent amid the confusion. Half a dozen loud-voiced small-heads led in an uproarious chorus, "Long live our country! Long live Panamica! Long live Panamica!" followed, in tones equally uproarious, by an outburst of, "Down with A-uria! To the death-heap with A-uria. Down, down, down with A-uria!"

At first I could not understand the reason for a demonstration so violent before the cause or nature of the war was even known. I observed, however, that the small-heads who led in the cheering belonged to the guard stationed to keep order in the room, and so were members of the lowest species; and having heard that the brains of these poor creatures worked by automatic reflexes, I was able to comprehend their actions.

There were in the audience, however, one or two persons—the large-heads and the countrymen of Luella—who desired to know what the war was about. And after the howlings of the mob had died down—which was not before many minutes—these persons made their voices heard. In response to their inquiries, Dr. Mulfli proceeded to mention specific facts, although the small-heads showed no interest, and, for the most part, looked on with bored and uncomprehending expressions.

He began by unfolding a huge map of the world and displaying it against the wall. "You are all aware," said he, "that ever since the vindication of the rights of large nations at what is known as the Triangular Peace of the year 10,010, there have been only three countries in the world. The greatest, of course, is our own Panamica; it covers two entire continents."

Here he pointed to the map, indicating those strips of land formerly known as North and South America.

"The next greatest is A-uria"—he designated what had once been Europe and Asia—"and almost equally powerful is Afalia, which comprises all the remaining territory. The establishment of this triple system of empire, of course, has brought world problems of a peculiar nature; for one thing, war, while less frequent, has become more dangerous than ever before: if any one of the three countries opens hostilities upon either

of the others, the third will hold the balance of power. Hence a country that goes to war nowadays is very careful about securing the moral aid of the neutral. So it has been in the past—the present war, however, is proving an exception; the aggressor has had the poor sportsmanship to secure more than moral aid! To be precise, two nations have declared war upon the third!"

The professor paused. Breathless exclamations swept once more through the assemblage; the faces of all were tense with excitement and pale with alarm.

"A-uria is not the only nation to make war upon us!" Mulfli continued, vehemently. "Afalia has taken sides with her!"

Once more pandemonium broke forth. There were hissings and shrill cries, murmurs of surprise and shrieks of dread, roars of rage and howls of hate; while over all, after an instant's delay, rose the measured shouting of the small-heads, "Down with Afalia! To the death-heap with Afalia! Down, down, down with Afalia!"

"I am afraid victory will be less easy than you think," stated the professor, solemnly, after the tumult had died away. "We have the world against us; we shall have to show the world how to fight. Our insect warriors, to be sure, have no superiors in any land—"

HOW did it start? Tell us, how did it all start?" an eager voice interrupted from the rear.

"I was just coming to that," the professor obligingly explained, not at all angered at the inquiry. "You see, the trouble is all about the weather again. Ever since we learned how to regulate our climate scientifically, there has been no end of trouble from anarchists and cranky advocates of 'Freedom in weather!' 'Back to nature in weather!' and the like; we have even had some wars from this cause—as, for example, the great Civil War of the one hundredth century, in which the advocates of rainfall and the advocates of aridity watered the soil with their blood. But never has there been so great a weather war as the present. Never have such fundamental international principles been involved. You recall that huge engineering work undertaken by our country at a cost running well into forty-three digits—that unparalleled achievement by which we diverted the Gulf Stream, brought warm waters to the northern shores of the Atlantic, and gave the bloom of the orange to the coast of Labrador. In this accomplishment, you may remember, there was one minor drawback—at least, A-uria considered it a drawback, for it deprived her of the Gulf Stream and gave her an Arctic current instead. As a result, there has been a drop of forty-five degrees in the mean temperature of her western coast, and ice fields are forming where once her fig-trees grew.

"A-uria has accordingly seen fit to object. She has had the poor sense to demand that we destroy our engineering works—a thing manifestly impossible, considering the cost of forty-three digits. There is only one reasonable conclusion—more than that, only one patriotic conclusion!—A-uria has long been meditating a war of aggression, and, now that her plans are ripe, she has used our innocent activities as a pretext. She has, in short, been contemplating an assault upon our climate, which it is her intention to seize and destroy. It is a clear case of international jealousy. We have no choice, therefore, but to shed the last drop of blood in defense of our climate."

"Our country and our climate! Our country and our climate! Fight, fight, fight for our country and our climate!" came an energetic chorus of small-heads.



But once again the ways of Sassun proved incalculable. I shall never forget the happy smile that illumined his face when first he set his eyes on the new flies.

"Your patriotic spirit does you credit," stated Mu-fia, beaming upon the small-heads. "You will soon have a chance to display it in actual battle. . . . And now, in conclusion, let me say one thing only. From this time forth, the Insect Basements will be organized upon a military basis. My future lectures will concern the military uses of insects. You will be occupied entirely to develop the military character of your charges. They will be mobilized to the last bug. The day is not far distant when all the small-heads present—including all the male insect-keepers, whether small-heads or not—will be called upon to lead the six-footed warriors forth to the field of glory."

"Just what did he mean by those last words?" I asked Luella, as the meeting broke up and we made our way slowly toward the door.

Her face was deathly pale as, with averted eyes, she replied, "It is usual, in wartime, to send forth the insect-keepers to fight—and to die. You too, my friend—you too must go—"

Ably she halted, choked by a rising emotion. With a fierce gesture, she turned aside, threading her way energetically through the deepest of the crowd. And when next I caught a glimpse of her eyes, they had a dewy sparkle, and moisture was on her cheeks.

## CHAPTER XI.

### Onward, Stinging Soldiers!

**D**URING the days following the outbreak of war, there was only one subject of discussion in the Insect Basements. That subject, of course, was the weather. All tongues denounced the insolence of the A-urians in coveting our climate; all tongues praised the peculiar excellence of that climate, and the perfection of the system which made the forecast always "Fair and mild"; and all persons—or, at least, all small-heads—made such frequent avowal of their desire to die for their climate that one began to doubt their willingness. To me it seemed peculiar that these immured beings, locked in artificially heated and lighted underground vaults where they never saw the sun, should make such an uproar about the weather; but of course, being but a novice in the ways of the age, I could not presume to judge them. Naturally, however, I did reflect upon the greater reasonableness of the twentieth century, when no one ever lost his head about things that did not concern him.

But the weather, as I presently discovered, actually did matter to some of the city dwellers—to those wolf-faces privileged to dwell in select apartments projecting high in air above the sunlight accumulators. These fortunate ones, though comparatively few in number, included all the judges, the legislators, the diplomats and in particular the financiers of the land; hence they were deserving of privileges, and it was only right that they should enjoy the light and air while their fellows dwelt in windowless rooms below sunshine level.

The facts concerning these higher wolf-faces were revealed to me upon one of my occasional new-won days of freedom. Climbing by means of a long sloping tunnel to the city level, I was then able to gain some interesting glimpses of contemporary life. I discovered that the living quarters were arranged according to species, the wolf-faces being accorded the highest, the large-heads second highest, and the two grades of small-heads the lowest; I discovered also that all members of the community, except the wolf-faces, were assigned to their work by a leading authority, known as the Financial Democrat, and were subject to asphyxiation for breach of duty; I was informed that the prescribed hours of work were one every three days

for the wolf-faces, and twenty-four daily for the military small-heads, while the rewards pursuant to what was known as the "Law of Industrial Gravitation," were in inverse proportion to the extent of the services performed. As for the ownership of property—this was attended to exclusively by the wolf-faces, who thus earned the right to a privileged place and relieved their fellows of the burden of possession. It was said that they performed their duties so conscientiously that anything which once passed into their hands was certain never to leave them.

On my first day of freedom, I chanced to be present at a rare and rousing ceremony. Donning green glasses, ear protectors and monoxide mask, and mounting to the street level, I was surprised to find that the appearance of the city had changed totally since my last visit. No vehicles now swept in a racing confusion through the broad thoroughfares beneath the gray steel towers; there were no hissing airships in sight, nor anything on wheels; the noise was so slight that I might have dispensed with my ear protectors; while behind long red drapes against the walls on both sides of the streets were masses of small-heads standing ten tiers deep, with here and there an elevated platform whereon sat a few large-heads or wolf-faces.

"Patriotic rally to-day. Admission free. All work suspended, by order of the Financial Democrat," ran a huge sign in seven colors, which swung high above the street, gleaming and glittering in the likeness of a Gargantuan beetle. "Prove your loyalty, and be present."

Forthwith I decided to prove my loyalty. It was with high anticipations that I made my way to a rallied-off central square, and waited; nor were my hopes doomed to disappointment. After only about three hours' delay, the festivities opened. First came a military procession, dominated by the red worm-shaped national flag, and led by interminable lines of insect cages. I will not pause to describe the latter, since I was already acquainted with them professionally; I will only state that the small-heads cheered them prodigiously, screaming and yelling, waving their arms furiously in air, hailing them with fervid songs and even breaking into tears under the stress of their emotion.

**D**IRECTLY in the wake of the insects, there marched a long array of the military small-heads. Had I had no previous experience to inform me, I would scarcely have known whether these well-disciplined creatures, with their little lumps of heads perched between massive shoulders, were living men or steel mechanisms; they all moved in such perfect time, and with such scrupulous monotony of rhythm, that it was by no means easy to ascertain whether or not they breathed. The difficulty was enhanced, moreover, by the system of leadership in vogue among them; at their head, borne upon a long six-wheeled car, was a curious machine surmounted by a long iron horn; and at measured intervals, with parrot-like regularity, this instrument shouted out commands, "Com-pan-y right! Com-pan-y left! Pa-rade rest!"—commands which always were promptly obeyed.

"The phonographic system of leadership," I heard someone remark, "eliminates the human equation, and has been proved to add forty-four per cent to the efficiency of our troops."

Not less surprising, to my mind, were two other instruments that accompanied the army. One was a huge machine like a clock with a ten-foot dial, whose thunderous "Tick, tick, tick, tick, tick, tick" was most unpleasant to my ears; the other was a complicated device, with slowly revolving wheels and chains and

innumerable swift-moving levers, which clattered and rattled unceasingly like a poorly oiled typewriter.

"Would you mind telling me what those are?" I asked an affable-looking large-head, who sat perched on a tall seat just to my left. And obligingly the stranger explained, "The first instrument is, of course, a military chronometer, whose music has of late years been substituted for that of a band. It is regarded as more regular and business-like, and its tunes are so much simpler to follow. As for the second machine, it is known as a 'Martial Register'—that is, it is so sensitive to the vibrations of the ether that it will record any variation in the regularity of the gestures or the foot-movements of the soldiers, down to the millionth of a millimeter. It also takes note of the company and number of the offender, so that he may be held for chastisement. A remarkable instrument!—it is largely responsible for the present perfection of our army."

I thanked my informer, and thought what an extraordinary thing was the originality of the large-heads, who had invented this machine which removed all danger of originality in the small-heads.

When the soldiers had all passed—which was only after an hour, though they marched rapidly, in rows fifty broad—there appeared an elegant party of perhaps a hundred wolf-faces, who rode in gilt and silvered vehicles in costumes of silver and gold. From the vociferous applause which greeted their arrival, I knew that they must be persons of importance; and I was not startled to be informed that they were the generals who were to lead the army, and the financiers who were to lead the generals. I was a little surprised, however, to observe that they did not all conform to the prevailing type; they all, to be sure, were puny of limb, and most had the canine features of the wolf-faces; but two or three, perhaps being men of exceptional distinction, showed some individual variations—instead of possessing the physiognomies of wolves, they looked more like weasels, gorillas and hogs.

One of these persons seemed to be the particular target of all eyes. More lavishly attired than the others, and seemingly a cross between the weasel and the wolfish types, he possessed what I may call a carnivorous expression—a single glance from his icy bespectacled little eyes, and one felt that he would like to devour one. Yet the cheers of the multitude showed him to be most popular; and the reason became apparent when I heard him addressed as the "Financial Democrat."

Evidently he was to favor us with a few words. His glittering car halted in the center of the great open space; his chair was elevated by some automatic device to a height of ten feet; and, seated proudly in air with the mien of an emperor commanding his subjects, he puffed out his flat little chest with kingly pomposity and slowly cleared his throat to speak, while over the audience came a breathless silence.

"Large-heads and small-heads," he began, with pontifical gestures, but in a shrill, almost womanly voice that jarred upon me like rasping metal, "we are gathered here to-day upon a mighty and momentous occasion. It is, indeed, a super-occasion. For we are now waging a super-war. It is being fought with super-bravery by a race of supermen against a band of super-cowards and hypocrites. In fact, it is a super-super-war—"

Here there burst forth such torrential applause that the speaker had to pause, and bob his little bald head up and down for at least five minutes by way of acknowledgement.

"Everything, I can assure you," he at last resumed,

regardless of continued yells of acclamation, "is being done in a hyper-perfect way. We are putting forth extra-supreme energies, and shall have more than maximum success in crushing a foe that displays less than a minimum of humanity. In other words, we are very extremely—"

And in such a vein the speaker continued, winning applause by a vocabulary of superlatives that would have been the envy of any politician I had ever known.

**A**FTER half an hour in which he aroused boundless enthusiasm by saying nothing in particular, the Financial Democrat came down to a concrete appeal. "Although heaven has foreordained that we shall win the war," he pleaded, "let us spare no effort to deserve success. Let us conserve our vital resources; in particular, let us conserve our insects. I beg of you, large-heads and small-heads, undergo privation for the sake of your country. Mothers, give your children no more beetles and caterpillars to play with; young ladies, wear no more spiders and flies in your hair. The effort will be difficult, no doubt, but you must bear in mind that, as one of our most famous generals has so well declared, 'War is war!' In the interest of your weather, I entreat you to deny yourselves. Every insect is needed in the cause."

The speaker paused to consume a glass of water passed him by a small-head; then briskly continued, "Mobilization, as you know, has already taken place. All young men and many young women of the military species have been summoned to the colors, and five million are already about to set forth for the front. Just where the front may be, of course, cannot be divulged for reasons of military necessity. If the first five million are exhausted, as they seem likely to be in such a super-war as the present, five million more will be summoned, and then five million more; and if all the military small-heads are eliminated, we will draw, as usual, upon the laboring small-heads. Meanwhile the large-heads and the Financial-Political species, being excused on the grounds of physical inability, will stay at home and do their bit by manufacturing propaganda and moral aid. At the same time, we will take good care of the nation's property, and will also supply the necessary suppressive laws and the censorship. In all this, you see, every one will cooperate and each will bear his burden; and, working together in this ant-hill way, we will most certainly win the war with super-glory."

Tumultuous applause, a sounding of horns and a beating of drums greeted the speaker's concluding words—although, in view of the relief visible on many faces, I was not certain whether the people were cheering what he had said or the fact that he had finished saying it. A patriotic anthem, beginning "The fighters that hatch in the spring," was now sung by a chorus of all voices; then followed a hymn entitled, "Onward, stinging soldiers"; and, by way of concluding the ceremonies, the Financial Democrat led in a song which impressed me as so refreshing that I noted down the words, and have them with me yet.

Here are the first two stanzas:

Come, small-heads, march together  
And battle for our weather,  
But ask not why, nor whether  
We shall march back again.

Where lines of scorpions bound us,  
And hornets swarm around us,  
And stinging bees confound us,  
We shall be insect men.

Come, be not sad nor tearful,  
For ants enlarged and cheerful  
And spiders black and cheerful  
Shall be our hope and pride.

Mosquitoes that pursue us,  
And gnats and wasps that woo us,  
Shall prove to all who view us  
That God is on our side.

With the words of this anthem still ringing in my mind, I returned to the Insect Basements. Little did I realize how soon the sentiments of the song were to apply directly to me! Upon reaching my termitarium, I found an enormous sheet of folded paper, upon which my number was scrawled in a large uneven hand. Another note from the Section Commander! While not unused to such missives, I trembled just a little as I opened the document—an odd premonition had taken possession of my mind. But the words neither confirmed my presentiment nor denied it: "Number 18: See me directly," was all that it said; and the official seal, "Section Commander 457," was stamped beneath in the likeness of a crawling caterpillar.

Still tortured by unaccountable forebodings, I hastened to the Section Commander's office—there to wait, as usual, for two or three hours before being permitted to see my chief.

It was with an air of unwonted affability that she greeted me; but I thought that there was just the hint of a sly glitter in her eyes as she bade me be seated.

"I have selected you for a singular honor," she informed me, with tantalizing deliberation. And then, while I sat regarding her anxiously, she repeated, with something like a chuckle, "A singular honor, indeed. Sassun has recommended you."

ALL my forebodings swept through me with renewed force. If Sassun had recommended me, could I expect anything but the worst?

"Each of the Section Commanders," she continued, slowly, "is required by the Financial Democrat to select a particularly valued and trusted insect keeper to set forth for the front with the first draft contingent of small-heads. Naturally, we must choose with circumspection, for the favored individual will become a leader of the insect brigades upon the field of glory. The honor of my choice upon this occasion—"

She halted, eyed me searchingly, then proceeded, still more slowly than before, "The honor of my choice upon this occasion has fallen upon you."

I did not know what to reply. I sat staring at the Section Commander like one dazed. If thanks were expected, I failed woefully in my duty. All my world had been torn from beneath me; black chaos loomed ahead, a chaos of swarming, creeping insects. . . .

"You must not be too overwhelmed by the distinction," continued the Commander, in her blandest tones. "You deserve all that we are doing for you—that is proved by your success with the super-flies."

The speaker paused, as if expecting some reply; but still I had nothing to say. And her words became crisper and sharper, and took on a dispassionate and mechanical ring as she concluded, "You will report here for mobilization in three days. Immediately afterwards you will depart for the training camp and the front. In the interval, you may make any necessary preparations. Good-day, Number 18."

And I found myself once more outside the Section Commander's office, reeling beneath a greater blow than I could at first realize. "What of Luella? I kept asking

myself. What of Luella? I should be torn away from her; I should have no chance to further our friendship; perhaps I should never see her again. The insects did not matter; the probability of death did not matter; certainly, the winning or losing of the war did not matter—but Luella, Luella counted for everything! Let me not hesitate to confess it—I felt suddenly smitten and forlorn; the tears came into my eyes, and I had to bite my lips to repress them; and, thinking of our approaching separation and how long it might endure, I was as one who, loving the open world and the sunshine, unexpectedly finds himself sentenced to a dungeon for life.

## CHAPTER XII

### A Proposal

ON the day following my interview with the Section Commander, Dr. Mulfi was to deliver the last of his series of lectures. And then I should have the chance to meet Luella—perhaps for the last time. Needless to say, I did not wish the opportunity to escape me; accordingly, I wrote a note to Luella, and deposited it conveniently under a rock at the edge of one of her moth-cages: "Meet me at Mulfi's lecture—without fail."

Several long anxious hours followed, while I tortured myself by wondering whether Luella would see the note, or whether—horrible thought!—the moths would devour it before her arrival. Just what I would say when we met was more than I knew; but I felt that we had much indeed to say—our moments together were all that was left to soften the blow of my departure.

I might have spared my fears. As I watched for Luella near the entrance to the lecture hall, I saw her approaching fifteen minutes before starting time. Having no intention actually to attend the lecture, I motioned her down a side aisle that we knew; and she accompanied me silently, with a tense, anxious expression indicating that she had guessed much.

Still without a word, we took seats at a familiar meeting place, on a projection of stone, shielded from view by the tall flanks of the grasshopper cages. Then, and then only, did she turn to me, her hands clasped intently on her lap, her eyes burning with a sad inquiry she hardly dared put into words.

"Well, my friend," she said, in those low musical tones I had learned to love, "what is it that has happened? You look so pale and worried, with your face all drawn up in dark lines—is there really anything to worry about?"

"I am afraid there is, Luella," I returned, slowly. "I saw the Section Commander yesterday. In two days—I leave for the front."

All the color had gone suddenly from her cheeks. A moist film came across her eyes; her lips trembled, as if to burst into furious utterance; she could only stare at me as if not comprehending the meaning of my words, and then mumble, "In two days—you—must go to the front?"

"Do not take it so seriously, Luella," I urged, noting the tears that were beginning to gather in her eyes. "I must go, it is true, but, after all, what does it matter—"

A hurt expression mingled with the sorrow that was transfiguring the beautiful features. "What does it matter? Can you suppose it does not matter?" she replied, with unexpected energy. And then, almost reproachfully, "Do you think—do you think I do not care?"

"No, I don't think that," I said; and, despite my dismal predicament, joy burst across me like a dazzling

light. In the suddenness, in the marvel of the revelation, I forgot for a moment the doom that threatened. "Luella! Luella! Then you do care?" I cried, while the world swam crazily about me, and unaccustomed glory bewildered my senses.

She did not answer, but sat staring wistfully into space, as though toward some splendor beyond the world of bars and cages.

"Luella, you do not know all that you have meant to me," I found myself exclaiming, borne away by an emotion I could neither stem nor control. And as if some outside spirit had put words into my mouth, and some power from beyond me had given me a strength and an eloquence not my own, I began fervidly to assure her how much she had been to me in my lonely, thwarted life. I cannot now recall just what phrases came to my lips; but I know that I told her how she had been my sole companion in this unfamiliar world, how only when I was with her I could feel a comforting and kindred presence, how she had given me courage to face life and was my one hope for the future. And I know that she listened intently, earnestly, with a sweet, sad expression on her face, like that of one who listens to desired, melancholy music; yet mingled with her sorrow there was a joy that seemed to convert her into something more than human.

So, at least, it appeared to me, whose love grew even as I unbared it. And oh, the delight of knowing that my devotion was not unrequited! Her eyes revealed that which her words could never say; yet her words completed the involuntary confession of her eyes, and gave me such assurance as I had scarcely hoped to receive from her lips.

"If I have meant something to you," she stated, simply and slowly, while her gaze avoided mine and her fingers plucked absently at the hem of her dress, "you have meant much to me. During all my long, long months in this terrible place, you are the only one who has spoken to me kindly. You are the only one who has brought me friendship, and companionship, and thoughts of the great outside world. And so I am glad that you said what you did. I hope that you and I—I hope that you and I, my dearest—"

Here she faltered, confused, uncertain; emotion choked her, and flooded her eyes. And before she had had the chance to utter another word, I had gathered her into my arms in such a long, satisfying, world-excluding embrace as comes not many times to any of us.

WHEN at length she had disengaged herself from my clasp, it occurred to me to bring my rapid courtship to a still more rapid climax.

"Let us be married, Luella!" I pleaded. "Let us be married at once!" And, while she sat peering at me with big, wide-open eyes, I continued, "What though I have only two days more here? Let us make the best of them! We will be united—then no one can sever us, and, whenever I come back, I will know that you are here waiting for me!"

Tears came once more into her eyes. "Very well, my beloved," she conceded. "Very well—whenever you wish it. I have no other desire than to join my life to yours."

At these words, so simple and yet so all-revealing, I was once more exalted to the heavens, and my arms performed another rapturous ceremony, with Luella as their goal.

But before long I had to come down again to earth. Being something of a practical man, I was struck by thought of practical necessities. "I do not know what

the marriage rules may be in this land," I confessed. "Do you, Luella?"

"I do not," she admitted. And then, blushing slightly, and with a sparkling expression, "You see—I have never had occasion to find out before."

"Let us go to the Section Commander," I suggested, remembering vaguely that the "Manual of the One Hundred and Twenty-Third Century" had said something about government supervision. "She will be the proper person to tell us."

And so forthwith we strolled off toward the Section Commander's office. On the way, as may be surmised, we had no end of things to discuss—but, most of all, we were occupied with revelations concerning my early life. I informed Luella that I had been married before, and described Kitty and our life together with all the respect consistent with truth; but Luella, to my surprise and delight, did not seem greatly concerned about the affair, and said that she saw no reason to be jealous of a woman who had been dead so long. "Besides," she added, with a flash of conclusive logic, "if she didn't know how to keep you—why, then, she simply deserved to lose you."

This matter being disposed of so agreeably, I inquired whether Luella did not hesitate to marry a man so old as I was. "I have passed my ten-thousandth birthday," I reminded her, soberly. "It isn't often that a person of my years wishes to wed."

But she turned toward me with gracious, beaming features. "Why bother about such things? Anyhow, you do not look your age."

Whereupon we both burst into hearty laughter, just as if the shadow of a whole world did not lie upon us, threatening, within two days, to part us perhaps forever.

Arriving at the Section Commander's cabin, we were gratified to learn that our superior was at leisure. Only a few minutes passed before we were admitted to the inner office—to find the wolf-faced lady in anything but a charming mood.

"Sit down!" she snapped at us by way of greeting; and while we silently obeyed, she glared at us with angry little greenish eyes that smote us like a rebuke. "Well? What is it?" she frigidly demanded. "At this hour, both of you should be at work!"

It did not seem exactly a propitious moment to mention our romantic mission—but what else was there to do?

Awkwardly and hesitatingly I began, "We have something very special to see you about. It is, in fact, something connected with the deepest hopes and desires of our lives. To be perfectly candid, we—"

"Come to the point! I can't wait all day!" she cut me short. "Just what do you want to say?"

"Only this," I blurted out, forced to an abrupt confession. "This lady and I want to be married."

"Married!" She stared at us with a scandalized expression. "Married! Why, how immoral of you both!"

I gaped at her, dumbfounded. Never, in my experience, had marriage been termed immoral.

But perhaps the Section Commander had not heard me rightly. "I want to make this lady my wife," I started to explain, after a moment's pause. "I want to—"

"Yes, I understood you the first time!" she interrupted. And she eyed me with a glance that made me think of cold green javelins. "What baffles me is that you should both have the brazen effrontery to confess your fault."

"I am not confessing any fault!" I stated, sharply. "Indeed you are! Didn't you just ask to be mar-

ried?" she demanded, in the tones of a judge passing sentence. "A gross breach of good taste and propriety at all times—particularly unpardonable now, when we are at war!"

I NOTICED that a pallor had come over Luella's face, and that she bit her lips to keep back the tears. As for myself, I could only stare at the Section Commander in anger and dismay, while she warmed to her subject, and continued, in tones severer still:

"Now that we are at war, we should be conserving all our resources for the country's good. We should be giving of ourselves, instead of thinking of ourselves. We should not be talking of love, but of the weather. Have you completely forgotten that your country's climate is endangered? Have you no interest but your own silly little romance? Shame on you! Where is your patriotism? Why, when I was your age, I was busy preparing insects to torment the foe! . . . Of course, I always did say the younger generation had no sense of responsibility!"

Having listened patiently to this tirade, I summoned up courage to suggest, "But neither of us, Your Honor, meant any harm. We did not know that marriage in this land is regarded as wrong."

"Then you should have known! Ignorance is no excuse!"

Once more she glowered at us savagely then, with a slight relaxing of severity, proceeded, "I realize, of course, neither of you has been very long in this country. But, personally, I was never in favor of admitting so many foreigners. Still, since you are here, it may be best to teach you something about our laws. Let me read you a few sections from our revised Civil Code."

With these words, she flung open a huge octoboth-bound volume which reposed conspicuously on her desk. She skimmed over the pages with the speed of a practiced hand; but it was several minutes before her keen eyes ceased their searching.

Finally, with a satisfied expression, she grunted, "Ah! Here it is! Laws of eugenics and marriage!" Then, while again I recalled dimly what I had observed in the "Manual," she gravely began to read:

"Section 114; Sub-section 81. The ancient system of marriage, dating from a barbarous antiquity, is hereby abolished. The right of the individual to espouse whom he will, is terminated, as being one of those capricious and anti-social institutions which cannot endure in an intelligent society. We must recognize once for all that the old superstitions concerning love and romance are obsolete; that marriage is an affair not of the individual but of the community; that the function of reproduction can best be regulated by means of an impartial and unsentimental biological selection, and that fitting large-heads and small-heads, consequently, can be developed only when the State decides who shall be mated and to whom, according to a scientifically controlled system of eugenics."

The Section Commander looked up from her book with something approaching a smile. "This, of course," she explained, "is an ancient law, dating back thousands of years. It is largely because of this rule that we have been able to divide mankind so successfully into species. . . . Now I will read you some regulations of a later date. 'Sub-section 82. In each town there shall be a Marriage Bureau, composed of eminent medical men and biologists. Each year all adult inhabitants shall submit to a physical examination, and those found fitting for marriage shall be united at once to designated persons. This means, of course, those who possess the characteristics of their species

in, pronounced but standard form. Particular care shall be taken to make the procedure scrupulously scientific, and the crudity of the early optional system of mating shall in no way be permitted to interfere."

LUELLA and I exchanged distressed glances, while energetically the reader continued:

"Sub-section 83. Members of the Political-Financial Species shall wed only members of the Political-Financial Species. Sub-section 84. Members of the Intellectual Species shall wed only Intellectuals. Sub-section 85. Members of the Laboring Species shall wed only Laborers. Sub-section 86. Members of the Military Species shall wed only military persons.' And now, 'Sub-section 87—'"

Our persecutor paused for effect, then proceeded, with slow-drawn emphasis, "Sub-section 87. Individuals of any other species—specifically, those savages occasionally imported from remote lands—shall not be permitted to marry at all."

Thereat, with a smile that seemed to me the concentrated essence of all malice, the Section Commander turned to us, and blandly declared, "That, of course, applies to you. You see that, for the good of the race, inferiors are not permitted to propagate."

Luella and I sat staring blankly at the Section Commander. The blow of her revelation had fairly struck us mute. But gradually full understanding came to us, and indignation and dismay swept through me to the point of fury, and once again I felt an impulse to throttle the Section Commander. Luella, unable to control her emotions, burst suddenly into sobs.

And as I leaned over and attempted to console her, a shrill, harsh voice rang out unsympathetically, "Quit that crying! Tears are wasteful and unnecessary! Dry them away, and behave like a grown-up woman!"

But Luella, undeterred, continued to weep as copiously as ever.

"Dry your tears, I say!" persisted her superior. "I shall have you listed for insubordination!"

But even this threat had no effect, and the Commander, baffled for a moment, tried other tactics. "If I were as harsh as I ought to be," she declared, less vindictively, "I would have you both chastised severely. However, I am naturally mild of disposition—too mild. I often think, for my own good. You, Number 18—" here she pointed a thin, bony finger warningly at me—"may be excused because you are to go so soon to the front. But you, young lady," she indicated Luella ominously, "are not to be condoned so lightly. I shall not readily forget your anti-social attitude. Such frivolity may not go unpunished. And now, Number 18, you will kindly leave me alone to deal with this offender."

I raised my voice sharply in protest, but was interrupted harshly. "Unless you leave at once," the Commander snarled, "I will have you both locked in the cage with the stinging wasps!"

Realizing, that for Luella's sake as well as for my own, compliance was the only safe course, I stalked away without another word, while from behind me, half stifled now, rang the sobs of Luella.

Will it be difficult to judge of my feelings as I slouched off toward the insect cages? The agony, the impatience, the impotent rage of those moments were such as I hope never to experience again; I was in a frame of mind close to distraction, my wrath against the Section Commander tempered by compassion for Luella, my compassion for Luella sharpening my wrath against the Section Commander. The frustration of my hopes, the confusion as to the future, the uncer-

tainty as to what revenge the Commander might take on Luella, not less than the anxiety as to when I should see Luella again, all combined to leave me in such an unsteady, shaken state, that I was equally ready to scream, to burst into tears, or to do murder.

FOR a long while I lurked in sight of the Commander's cabin, but Luella did not come out. And with every passing moment I grew more uneasy, more fearful, more distressed. I suspect that anyone who saw me as I paced back and forth, back and forth, like a caged beast, would have mistaken me for a madman; and no doubt I looked like a madman, with my wild staring eyes, my fingers that crazily tugged at my dense hair, my hands that fluttered with nervous, uncontrollable movements.

So perturbed was I that all variety of rash expedients flashed through my mind; I even considered returning forthwith to the Commander's office. But before I could quite decide on this foolhardy exploit, Luella stepped into sight. She was walking hastily, her head held high, her eyes fastened straight ahead; but the marks of tears were on her face, and her pallor told of the recent ordeal.

"What did she do to you, Luella?" I demanded, as I took my place at her side.

She turned to me with big anxious eyes full of pleading. "You had better not remain with me, beloved," she urged. "She has vowed—has vowed dire penalties, if I am seen with you again."

My reply was something in no way complimentary to the Section Commander; and the region to which I consigned her was not one that good people crave.

"But what did she do to you? What did she do to you?" I insisted on knowing.

"Nothing, except lecture me, and lecture me, and then lecture me some more. Oh, the threats she made were terrible! Please, please, beloved—go from me now. It is for your good—and mine!"

"But when will I see you again, Luella?" I appealed.

She turned a despairing face imploringly skyward. And the tears returned to her eyes as she replied, "That is more than any one can say. But perhaps—perhaps it will not be long. I will try to write to you. I will write whenever I can. Now go from me, please! Any moment you may be caught!"

"But can I not—can I not at least see you before I leave?"

"No, you must not. For my sake—you must not take the risk!"

With great, brimming eyes she peered up at me. "Good-bye, beloved. I will be waiting for you. Good-bye—until you come back."

"Good-bye, Luella!" I murmured. And, scornful of all dangers, I seized her in crushing arms for one long, consoling, world-embracing moment. Then she had slipped from me and disappeared, a slender dark form lost amid the immensity of the tall walls and cages. And I stood gazing helplessly down the aisle where she had vanished, conscious of a sudden oppressive sorrow and of a great emptiness in the world.

### CHAPTER XIII.

#### Training Camp 1432

I SHALL not describe at length my departure from the Insect Basements and my journey to the Training Camp. My recollections of the trip are rather confused, for I was scarcely in a state of mind to take note of details. I only recall that, in company with a group of fifty small-heads, I was marched early

one morning from the Section Commander's office up to the city level; that there we were all given seats in a large-sized airship, which almost immediately got under way; that we passed through a gap in the walls, then darted high in air with breath-taking speed, and shot across the country in a westerly direction for over an hour—following which we came to earth before a gigantic wall of cement in a little valley between low bare hills.

Even had I not observed the red-lettered sign, "Training Camp 1432," I should have recognized the nature of the place from its forbidding appearance, no less than from the rigid lines of small-heads that bristled with ten-foot lances before the entrance. These persons, several hundred in number, must have been well disciplined, for they did not speak nor move nor give any other evidence of life as we approached; neither did they show any sign of having heard the password, which the driver of our car uttered, and in response to which the grated gates swung open and permitted us to pass.

Once within, I found myself in what might have been mistaken for a penitentiary. I recalled how, in early youth, I had once paid a visit of curiosity to a state prison, and how gloomily I had been impressed by the swinging steel-barred gates, one within the other, and by the long two-storied buildings with their endless rows of steel barred and steel doored cells. Now suddenly I seemed transported back to those grim edifices of a vanished age. "Was this a training camp, after all?" I asked myself, in amazement. Or was it a jail? What were those innumerable cell-like compartments in the great sprawling five-tiered structures of brick? And why were they all equipped with grated doors?

As yet I had no way of answering, but dire suspicions flitted through my mind. Nor were those suspicions allayed by ensuing events. First of all, my companions and I were all herded into a huge waiting room, where, in company with three or four hundred other recruits, we had to pass several hours as best we could. The waiting was far from pleasant, particularly since the brick walls were windowless, the electric glare was painful to the eyes, and conveniences such as chairs and benches were entirely lacking; but I was most disturbed to observe the nature of my companions, the majority of whom were small-heads of the lower or automatic-minded species.

One by one, upon the summons of a laboring small-head, the recruits were admitted into an inner room. What happened there I did not know, but none that entered were seen to return; and curiosity combined with impatience to make me hope that my turn would come before long.

And eventually my turn did come—though only after protracted waiting. Being ready for anything, I was not surprised to find myself conducted into a large room, where numbers of small-heads stood rigidly in waiting and a score of strange and intricate machines were ranged against the walls.

But I could not scrutinize these immediately; my gaze was focused upon a particularly sour and cynical-looking wolf-face, who sat behind a paper-strewn desk.

"Member of foreign species. Habitat: Central Borneo. In captivity, five months," read a small-head from a huge official record book, as I stood inquiringly before the desk. "Has been sub-keeper of the insects in the Government Basements at City 64. Showed exceptional bravery when face to face with a man-killing scorpion. Also skill in breeding flies of super-excellence. But a pronounced tendency to insubordination. Inexplicable desire to be married. Character,

weak; general deportment, unsatisfactory. Latest occupation: keeper of termitarium. Signed: Section Commander 457."

THIS statement having been read in an automatic, mechanical fashion, and in a voice as dead as that of a jaded telephone girl, the wolf-face looked up and surveyed me for one long, inquiring, critical moment. Instinctively I read the green light in those cutting, contemptuous little eyes; and I was not relieved when finally the official declared, in tones like those of a cracked phonograph record, "A poor report! A very poor report, upon the whole! Still, it does show promise. Let us begin the examination."

"Step on to that machine!" commanded a small-head, designating an affair of many levers and twisted wires, with a platform like that of a large-sized pair of scales.

I did as I was requested; and immediately the small-head fastened rubber tubes and straps to all parts of my body; while, with a humming as of an electric motor, and at the same time with clattering as of an adding machine, the levers began to sway and the wires were set into rapid vibration.

In a minute or two the ordeal was over. I stepped down from the machine, and the small-head presented his chief with a long strip of paper, whereon an imposing array of figures was neatly typed.

As the wolf-face perused the document, a frightful scowl spread his lean, rapacious features. "Terrible!" he muttered, at length. "Simply terrible!"

"What is terrible?" I ventured to ask, wondering what offense I had committed.

The official glared at me indignantly. "Soldiers should speak only when spoken to!" he barked.

For a moment he sat regarding the paper musingly. Then, turning to me, he sternly declared, "Since you are so curious to know, I might as well tell you the worst. First of all, the cranial measurement is most unsatisfactory. It proves your head to be forty-five per cent above standard size."

It occurred to me that, in my own times, I had worn only an average-sized hat. But I thought it best not to mention anything so irrelevant.

"Bad as this is, it might be overlooked," continued the wolf-face, "if only the other measurements were normal. They are, however, far from that. Occasionally, men with over-large heads have been of military utility—if the quality of the contents has been sufficiently inferior. But I regret very much to state that there is no such hopeful sign in your case. The tests reveal a thought-content of sixty-nine per cent. This, as you may be aware, is sixty-eight per cent above the maximum."

The wolf-face paused, and tapped the desk reflectively with his stunted fingers. "There is only one chance," he resumed, slowly, "We will see if your individuality is properly atrophied. Sergeant, will you give the recruit the individuality test?"

The small-head thereupon advanced, saluted, and led me off to a second and even more formidable-looking machine. Promptly he strapped me in, so tightly that the rubber bands cut my skin and checked the circulation and I had to struggle to release myself. Then, while I battled vainly to ease the pressure, a number of thick steel rods began to lunge alarmingly in my direction, stopping only when within touching distance, then retreating and swiftly lunging forward again. Of course, I squirmed and wriggled as best I could to avoid these murderous-looking devices; and though I suffered little direct damage, I felt like one who has been through an earthquake by the time the

rods had ceased their manipulations and I was released. "Your reactions to the rods and rubber bands will prove the size and nature of your personality, if you have one," the wolf-face explained, while he sat waiting for the small-head to bring him the report which the machine had typed.

I felt fairly confident that my personality would prove to be of the required insignificance, for it was something on which I had never been commended. But no! the wolf-face's expression, upon his first glance at the records, indicated that I had again disappointed him.

"THIS will never do!" he snarled, an evil sneer upon his thin, canine features. "This will never, never do! Why, you have enough individuality for a regiment! Seventy-six per cent. of it! At least a thousand times too much! A few such men as you would ruin the army!"

I stood staring at the wolf-face without a word, suddenly hopeful that I might be excused from service on the ground of mental disability.

"It is men like you," continued the official, in tones of solemn denunciation, "who start most of the trouble in the world. It is men like you who refuse to fight, who object to being slain, who inspire discontent in the ranks, or even cause rebellion—worst of all, it is men like you who are disloyal to the cause and want to know what they're fighting for. No, you'll never do! Perhaps the best way will be to execute you in advance. That will save both time and trouble."

"What!" I gasped, in terror. "Execute me? What for?"

"For being an individual, of course!" snapped the wolf-face. "That is frequently done in war, you know. We don't want any individuals on the battlefield! According to the crude older method, we would wait till an individual had done some damage; but the modern way is to prevent the damage in advance. A much more efficient method, don't you think?"

Dumbfounded, I could only glare vacantly into the little green eyes that glared back hungrily, as if to devour me.

"There is, however, one other recourse," continued the wolf-face, more mildly. "While you will never be of any use in any of the main branches of the service, we may possibly yet find a place for you—provided that you respond favorably to treatment. Sergeant, will you see that the recruit is assigned to the Personality Reducing Department?"

And the small-head stepped forward, seized me rudely by the arm, and began to lead me away, while from behind me, punctuated by a gasty chuckle, rang the final words of the wolf-face, "If this cure fails, you know, there will always be time for the other method."

Events now began to move with bewildering rapidity. I was led down a long gallery to another supercilious-looking wolf-face, who gave me my official designation: Number 132,999 PRD; then I was sent to the Uniform Department, where I was arrayed in the standardized black military garb, with red skull-cap and red stripes that gave me an appearance singularly Satanic; next I was assigned to what was euphemistically termed my "room"—a four-by-six compartment which I shared with another recruit, and which was featured by a barred steel door that locked only from the outside. When first I heard the key turn in the latch, and found myself impotently clutching at the bars of this dingy bare cell, I realized with a shudder that my original surmise had been correct—

I had indeed come to a Training Camp, but I had also been sentenced to prison.

But my first taste of the cell was a brief one. In a few minutes I was released for what was known as "drill"—a duty which was thenceforth to occupy me for ten and a quarter hours out of every twenty-four.

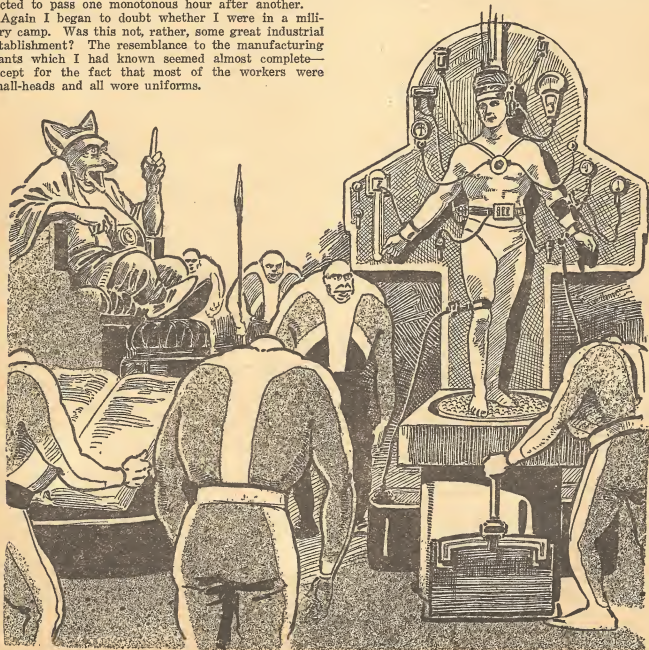
Drill in the Personality Reducing Department did not resemble that in any other branch of the army—certainly, it did not resemble any drill I had ever heard of before. It was accomplished largely with the aid of machines—machines of so strange and repulsive a nature that I shudder at the very memory of them. By way of beginning, I was taken to an enormous building called the "Reducing Factory"; and there, in the midst of gigantic wheels that grated and revolved, huge clanking chains, whirling wires and rattling levers, I was given a seat and began my drill. At first I could not get used to my work—all I had to do was to sit rigid as a puppet and to shift a little iron rod at intervals of about ten seconds, designated by the ringing of a bell; and in this occupation, which permitted of neither variation nor cease, since a small-head stood over me with admonishing whip, I was expected to pass one monotonous hour after another.

Again I began to doubt whether I were in a military camp. Was this not, rather, some great industrial establishment? The resemblance to the manufacturing plants which I had known seemed almost complete—except for the fact that most of the workers were small-heads and all wore uniforms.

When at last a thunderous gong had announced that my "drill" was over, I was placed again in one of the Personality Testing Machines. The results of the examination were declared to be admirable—in little more than half a day, my individuality had been reduced four per cent!

But now, by way of supplementary training, I was introduced to several new machines. In the first, and least unpleasant of the group, my hands and feet were gripped by steel clasps attached to long levers, and were made to sway involuntarily up and down with clock-like regularity, up and down, up and down, up and down for a full hour, responsive to the movements of the rods. This was what was known as the "Marching Machine"; its object, I was informed, was to teach me the proper rhythm to maintain with my arms and legs when on parade.

Much more disagreeable was the "Disciplining Machine"—an ugly metallic instrument reminding me of an electric chair. In this I was strapped as firmly as if for execution; and while I gaped in helpless terror, long scourges reached out in mechanical hands, and



I did as I was requested and immediately the small-head fastened rubber tubes and straps to all parts of my body. With a hum as of an electric motor and at the same time with a clatter as of an adding-machine, the levers began to sway and the wires were set into rapid vibration....

dealt blow after blow on certain sensitive parts of my anatomy. To escape them, even to resist, was impossible; neither had I the relief of screaming, since I had been gagged; I had merely to endure, and endure, and endure, while the lashes struck and struck, and my flesh crept and quivered, and my palpitating heart beat spasmodically.

When finally this senseless punishment was finished, ointment was applied to my bruised and bleeding skin, and I was bidden to observe a sign glaring above the "Disciplining Machine."

Checking my impulse to pummel the small-head who called the sign to my attention, I read as follows:

"NOTICE: TO ALL RECRUITS:

"From the most ancient times, military writers have agreed upon the necessity for discipline. The more the discipline, the better is the army, since the fewer are the individuals. But discipline was formerly applied in a haphazard fashion. The usual method was that of corporal punishment, which was obviously unfair, since many would escape its benefits. Besides, it was largely a matter of individual judgment or whim, and the commanders, while not usually negligent, sometimes overlooked the men most requiring chastisement. Hence the need for the 'Disciplining Machine.' This is one of the most democratic instruments ever devised; it neglects no one, it is partial to no one, it treats all alike; moreover, its daily employment on all recruits has insured a perfection of discipline never before known."

NEEDLESS to say, I was not overjoyed at the prospect of making the daily acquaintance of the "Disciplining Machine." Yet, far from beating me into submission, this brutal instrument had only roused me to thoughts of revolt.

But for the present I kept all such thoughts strictly secret; I was satisfied merely to be sent away from the "Reducing Factory" and locked once more in my cell.

By this time it was evening, and the entire encampment was lighted by an enormous glaring electric orb—a sort of artificial sun—which shone hundreds of feet above with a white light. But, except for this feature, the night had brought no change in the appearance of the camp; all had the same oppressive aspect as before, and, on every side, rows of small-heads stood ranged as rigidly and as automatically and as impassively as ever.

UPON returning to my cell, I found that my roommate had preceded me. This was the first we had seen of one another; yet our mutual greetings expressed mutual pleasure. For my own part, I was delighted to find that my comrade was not one of the small-heads, but rather a man of my own kind, with limbs normally developed and head of a normal size. And his joy in meeting me was clearly due to the fact that I likewise was not a small-head.

A few minutes' conversation served to confirm, what I had suspected from the first—that he was one of Luella's countrymen, who, like her, had been kidnapped in his native Borneo and made a slave in this strange land. His name, he said, was Targo (though here he was known as Number 132,101 PRD); he had been in the camp only three days, and was being subjected to a strenuous process of Personality Reduction.

"That is what always happens to our countrymen," he declared, dolefully, evidently mistaking me for one of his kindred. "We all have too much personality, and are made to suffer for it. That is why we were never much good in war."

He sat regarding me lugubriously for a moment, a wistful light in his grave brown eyes.

"I am rather upset just now," he confessed, staring absently toward some capsules and water that lay untouched before him. "My last cell-mate has met a sad fate."

"I don't know of any sadder fate than being where we are now," said I.

"His fate was worse still, if that is possible," continued Targo, solemnly. "He had a fearful amount of individuality. They found it wouldn't reduce. Tried it for a month, without any success. And so yesterday they led him forth to—"

"Yes? Led him forth to what?" I demanded, seeing Targo's pained hesitation.

My companion turned from me, to hide the emotion that flooded his eyes.

"To the asphyxiating room," he at length declared. And then, after a gloomy pause, "They say the end was painless."

I could only maintain a distressed silence. And so the wolf-face had not been jesting when he spoke of execution!

"Poor fellow!" proceeded Targo, after a moment. "He was a splendid lad. No one ever had a keener mind than he. That was his trouble from the first. He could see through any fraud as though it were made of glass. He always did maintain—" here Targo leaned close, glanced furtively about him, and whispered in my ear—"always did maintain that it would be better to let the weather go to wrack and ruin than to start another war."

Targo again peered about him furtively, as though frightened at having made so reasonable an utterance. But evidently no one had overheard; and, reassured, he turned to whisper in my ear something perhaps equally radical—when an enormous gong sounded suddenly from above, clanging and reverberating with hollow brazen ringing like a summons from the nether world.

"The twenty-two o'clock bell!" sighed Targo. "All conversation must cease, till the eight o'clock bell calls us back to drill."

Then, at the risk of detection by the guards, he whispered to me cautiously, "We're allowed ten hours' sleep, you know. It is not considered good for soldiers to be too much awake."

Even as he spoke, the great electric orb flashed off, and we were plunged into darkness. Without so much as a candle to guide us, we discarded our uniforms and climbed into the narrow bunks ranged one above the other against the wall, like the berths on steamships; then, while my bruised and wearied limbs found rest, my mind was plunged into the greatest uneasiness of all that uneasy and bitter day.

For now, when the silence was complete, except for the intermittent snores of some too-sound sleeper and the occasional calls of a sentry marking the hours; and when the only light was that which was cast now and then by the gleaming lantern of some passing guard, the whole horror and humiliation and unutterable loneliness of my plight came sweeping over me in one great wave. I felt outraged, without knowing whom to blame; despondent, without understanding what reason I had for despair; homesick, though there was no home whose loss I regretted; and indescribably weary of heart and soul. And I longed with a desperate, melancholy longing for Luella. I missed her kind words, her smiles, her consoling presence, as a blind man might miss the sun; it was because of her absence that my lot seemed so hard to bear. In my unavailing rage at our separation, I clutched at the iron

railing of my cot, and pulled as though to tear it to shreds; my trembling limbs raked my long, untended hair, my strained eyes stared in torment into the empty blackness, my tired limbs tossed and tossed on the sheetless mattress, and delirious fears and imaginations mingled with the scenes of the day and trailed crazily through my mind.

It was not till the night was more than half gone that sleep, the subtle conqueror, crept slyly up and took me unawares. But even then my torture was not over, for I fell into a confused dream that I was back in the twentieth century, striving vainly to shield Luella from the attacks of an insect ten feet long, whose face gradually revealed itself as the leering face of my wife, Kitty!

## CHAPTER XIV

### Tribulations of a Recruit

**A**MONG our few privileges in the Training Camp, the one I most valued was the permission to write a letter once every ten days and to receive mail with the same frequency. Of course, I wrote to Luella on the first possible occasion, describing my life in the Training Camp and inquiring anxiously for news of her. In representing my new environment, I was thoroughly frank; I did not hesitate to depict its faults, nor to reveal how utterly I detested it; and I exhorted her to tell with equal candor of her own recent experiences.

Having dispatched the letter, I waited for several anxious days for the reply, counting the hours until I might gaze upon the handwriting of my beloved. I was absurdly fearful that her letter or mine might miscarry, and that I should receive no reply. But not my doubts were unwarranted; in due time the answer came, and with a promptness that filled me with surprise no less than with pleasure.

Had execution been the penalty for delay, I could not have torn open the envelope more quickly. Eagerly my eyes raced along the contents—but dismay and a dull astonishment filled me as I proceeded. Was it, after all, Luella that had written to me? Or was it some stranger whose letter I had opened by mistake? Her words had a frigid and remote quality that did not seem like her at all; she made no mention of our love, but expressed only the most formal and conventional regard; everything she said seemed perfunctory and made-to-order.

Stranger still, she did not appear to have read my letter, though she assumed to answer it; in the face of my denunciation of the Training Camp, she declared that she was happy that I enjoyed my new life so well! And as for herself—though she had always loathed the Insect Basements, she announced that she was enjoying her work immensely! And this incredible remark she followed by the still more incredible statement that the Section Commander was treating her kindly!

No, it did not seem possible—these were not Luella's words, though the handwriting was clearly hers. Never had I been more thoroughly puzzled; never more upset by any letter. Surely, I had written nothing to give offense; nothing to justify her coldness. Could her mind have been unbalanced by recent suffering? That too seemed unbelievable; but I brooded and brooded until my own mind was in danger of being unbalanced.

And possibly I would actually have gone mad in the end had not an explanation come to me unexpectedly.

It was Targo that broke the evil spell. "What has

come over you?" he demanded that evening, as I sat glumly staring out between the cell-bars. "Won't your personality reduce? Or have you been ordered to the battlefield? You look so gloomy, one would think you had lost your last hope—or your best girl."

"That's just about what's happened," I groaned. And briefly I explained about the letter.

Targo did not seem impressed. He showed no sign at all of the sympathy I had expected. Instead, he heard me stolidly and without comment; and, after I had finished, he glanced to all sides in his usual furtive way before commencing to speak. Then leaning close, he whispered a single word: "Censorship."

Stupidly enough, I did not at first grasp the import of this word. And even after it had been repeated, I remained unenlightened, and sat staring at him blankly.

"Don't you know that all private correspondence is censored?" he explained, still in a whisper. "No one pays much attention to letters in wartime. Everything you say is likely to be altered, except that which isn't worth saying."

"But certainly, they wouldn't censor a love passage," I objected.

"That's the first thing they would censor. Love is illegal nowadays. It's regarded as a form of disloyalty. You should love only your country."

**R**EMEMBERING the remarks of the Section Commander, I began to understand.

"Even so," I pointed out, "censorship explains far from everything. The handwriting was Luella's. I recognized it clearly."

"You mean you think you recognized it," he corrected, scornfully. "Nothing is more certain than that it wasn't hers at all."

"Why, I would swear—" I began.

"It's enough to make any one swear," he interrupted.

And then, resuming his cautious demeanor, and after another wary glance to right and left, he inquired, "Haven't you heard of the Forgery System of Censorship? It's generally known to have been in operation since the war before the last, though of course this isn't admitted officially."

I confessed my ignorance, and Targo proceeded, "The older methods of censorship, you know, were painfully crude and obvious. An offending letter would merely be destroyed—or the objectionable parts would be crossed out. This in itself was inartistic enough—but those dullards who called themselves censors were so naïve as to put their signatures on every document, in some such fashion as follows, 'Censored,' or 'Passed by the censor.' Modern censors, however, are more scientific; they do not give themselves away so easily. Like true detectives, they try not to let their existence be known at all. They never destroy a letter without providing an equivalent—and there are not many letters that they do not destroy. In order to carry on their business efficiently, they engage a corps of expert forgers—men of proved and tested accomplishment. All the penitentiaries are ransacked to secure them. These are employed constantly in rewriting the various censored letters in a handwriting that few could distinguish from the original. That is why, if I were you, I would not be so much disturbed by Luella's apparent coldness."

"Oh! I knew nothing of that at all!" I exclaimed, greatly relieved. And I thanked Targo for the information; once more I could face a future that was not without its bright points.

But instantly a new difficulty presented itself. How

get any truthful tidings to Luella? And how receive any trustworthy information from her? The obstacles seemed insurmountable; and it came to me with a shock that henceforth our correspondence must confine itself to the things that did not count.

Yet, had I only been permitted to write freely, what a wealth of material there would have been to describe! Experience was crowding upon me during my days in the Training Camp, experience usually of an unpleasant nature, but rarely without its points of interest. Regularly I was passing my hours in the Reduction Factory, and with each day's training, my personality was going down from three to five per cent. Regularly I was being submitted to the torture of the Disciplining Machine, and to the monotonous exercise of the Marching Machine. And regularly I was given what was known as "Lessons in Patriotism"—which meant that I listened to a phonograph telling me that Panamica was the greatest, the richest, and the most progressive country that had been, would be or could be, whereas the foes of Panamica were the basest, the pettiest and the most backward nations in the history of this planet or any other, and deserved to be conquered in the interest of a superior civilization and a superior climate.

HAVING heard this sermon, which was delivered day after day in the same words and in the same tone of voice (in fact, from the same phonographic record), I was expected to repeat after the machine the oath of loyalty, somewhat as follows:

"I hereby swear eternal allegiance to my nation and its weather. I vow to protect it from any foreign weather. I will defend it with all the insects at my command, and, if need be, will be stung to death on its behalf. Praised be our weather, now and forevermore. Amen."

This oath, when recited by four or five hundred small-heads in chorus, sounded quite impressive. Yet I could not understand why, being worded to embrace eternal allegiance, it needed to be repeated every day.

Of the actual progress of the war I learned little or nothing; but this was not because our superiors did not take pains to inform us. Each day the bulletin boards would glare and bristle with notices, which invariably announced the progress of the Panamian arms. A typical report was as follows: "Great victory on the Grasshopper Front! General 44 BX, with an army of two billion locusts, has taken possession of ten thousand square miles of wheat-land and destroyed the crop utterly." Or, again, Marshall 111 DY, in command of four corps of the Rapacious Ants, has invaded Afalian City 321, and put all the inhabitants to flight, with the exception of 70,000 invalids and children, who fell a prey to the ants." Or, finally, "Brigadier 222 AZ, leading an expedition of 500,000 men and 5,000,000 scorpions, has prevailed in a pitched battle against a combined force of the Afalians and A-urians, estimated at 2,000,000 men and 10,000,000 scorpions, not to speak of a vast number of centipedes and tarantulas. The losses of the enemy are believed to be in excess of 1,000,000 scorpions. Our own losses are negligible: not over 20,000 scorpions, in addition to 100,000 men."

Upon observing the latter bulletin, I was convinced that Panamica had won a great victory. But Targo took pains to dissuade me. "The battle reports," he assured me, of course taking care to see that there were no eavesdroppers, "are always compiled before the engagement. This insures that they will be broadcast promptly. They are carefully considered and planned by the Minister of Propaganda—an official second only

to the Financial Democrat himself. As to what actually happens during the battles—that is something which it is not deemed best for the soldiers to know. Possibly it would dampen the military ardor."

At about this time, it is true, there were vague rumors that the Panamian cause was not progressing any too well. It was even bruited that we had been defeated in battle after battle, and that half of our country had been overrun by the enemy's insects. But all such reports were strictly unofficial, and moreover were whispered with the greatest secrecy—more than one unfortunate small-head, caught repeating the tidings, was asphyxiated on a charge of treason.

Before I had been one week in the Training Camp, I began fervently to desire to leave—to exchange its oppressive gloom even for the agonies and terrors of the battlefield. And I began to hope that my personality might reduce at a more rapid rate than the daily three or four per cent. By dint of considerable thought, I devised a scheme for *apparent* reduction: if I would resolutely refrain from squirming or struggling in the testing machine, much of my personality would fail to be recorded! A simple plan!—yet it succeeded, succeeded even beyond my expectations! On the first attempt, my individuality registered at only five per cent! And the day before it had been a full twenty-four per cent!

BUT subsequent trials could reduce my record no further. Despite all my efforts, despite my "drill" in the Reduction Factory, despite the Disciplining Machine, the Marching Machine and the patriotic lectures, I could not bring my personality beneath the five per cent. level. And when, in another week or two, no further improvement was apparent, I was informed by the small-head in charge that I should have to go before the chief wolf-face for re-examination and a final decision.

With a sinking of the heart, I thought of the asphyxiating chamber, and already seemed to feel myself gasping beneath lethal fumes.

Nor was I in a hopeful mood when I came once more face to face with that cynical-looking official who had assigned me to the Reduction Department. The frown with which he greeted me, and the scowl with which he glanced over my latest record papers, did not seem to bode well for his decision.

"Five per cent. is a high degree of individuality!" he muttered, by way of a beginning. "Too high for most uses! Can you do nothing to bring it lower?"

I assured him that I had already done my best.

"There are two branches of the service in which we can still use some individuality," he proceeded, slowly. "Not much, of course, but a great deal more than in the regular divisions."

He paused, and stroked his beardless chin reflectively with his stubby fingers. "The rules permit us to use five per cent. of it in the spying department."

"But I don't want to be a spy!" I ejaculated.

Sudden anger convulsed the lean, cadaverous features, and sent sparks to the greenish eyes.

"Don't want to!" he fairly screeched. "Don't want to! What does it matter whether you want to or not? Who gets anything he wants in war?"

Then, after another pause, he continued, a little more mildly, "Questions like that make me wonder whether your individuality isn't more than five per cent., after all. You don't know how lucky you'll be if you can get into the spying department. It's one of the two things that can save you from asphyxiation."

I was going to inquire what the other was, but decided that silence was the way of discretion.

"Sergeant, give the recruit the blood-test," the wolf-face commanded a small-headed attendant. "Personally, I suspect that the results will be negative."

Promptly the small-head stepped forward, seized me, and strapped me into one of the machines ranged against the wall. When I was bound beyond possibility of struggling, he bared my arm, and stabbed it with a long tube-like glass instrument, which instantly became red with my blood. I groaned in agony, but the small-head gave no heed; and only when several ounces of my life-fluid had flowed out did he remove the instrument and bind up the wound.

After being released, I had to wait for two or three hours, while my stolen blood was sent into an adjoining room to be inspected by some one designated as "Colonel 4212 BJ."

THIS officer, who proved to be a particularly dwarfish large-head with a weazened face, eventually appeared in person, tottering feebly with the support of an attentive small-head. In one of his puny hands he bore an ink-marked chart; in the other he tightly grasped a test-tube filled with a pale bluish liquid.

"Well, Colonel," inquired the wolf-face, after the large-head had been assisted to a seat, "what are your findings?"

Puffing and panting from his exertions, the large head presented his co-worker with the chart, and at the same time held up the test-tube significantly for inspection.

"You see that yellowish precipitate," he murmured, excitedly, pointing to a few sandy specks at the bottom of the tube. "Of course, General, you know what that is."

"Of course!" affirmed the General, in tones of stern disapproval. "As I expected, the blood-test gives negative results!"

"Surprisingly so!" sighed the Colonel. "But that is not the worst. Never, in all my experience—and I have been thirty years with the Chemical Department—have I found so high a percentage of pacifist psychology. I would have thought the phenomenon obsolete—stamped out long ago by our Bureau of Propaganda—if I didn't see it here with my own eyes."

And once more he pointed meaningfully to the sandy particles.

"I don't see how that proves me a pacifist," I found myself exclaiming.

"You don't?" The large-head turned upon me with contemptuous eyes. "Then you know nothing of modern science! Having proved that the human body is nothing more than a physico-chemical mechanism, whose sensations, emotions and beliefs are due to the action of certain glandular nitrogenous products secreted in minute quantities into the blood, we are able, by an analysis of the blood, to arrive at an accurate estimation of the potentialities, feelings and views of any person. Nothing could be simpler. This discovery, which is at the basis of modern psychology—"

"Come, come Colonel," interposed the wolf-face, tapping his desk impatiently. "The time for lectures is in the class-room."

"A thousand pardons!" apologized the Colonel, bowing low. And his superior, taking no further notice of him, passed several minutes in a silent perusal of the chart.

"So far, I see nothing at all promising," the General at last announced, severely. "Some of the reports are most discouraging."

And gravely he read, "Military loyalty, negligible. Pugnacity, indifferent. Powers of deception, undevel-

oped. Skill in prevarication, weak. Potentiality for hatred, mediocre. Love of glory, inconsiderable. Readiness to be slain, slight. Passion for self-sacrifice, zero."

Solemnly, and as if coming to some profound conclusion, the wolf-face put down the chart.

"No, no, you will not do at all," he decided, glaring at me mercilessly. "Men such as you would be the ruin of our espionage system. Do you not agree, Colonel?"

"Perfectly," coincided the Colonel, again bowing low. "Perhaps, after all, I was right in considering asphyxiation in the beginning," ruminated the General.

But the large-head broke in with a timely suggestion: "Do you not think he could do the alternative work? A man of his personality should succeed in the Department of Insect Distribution."

"I had considered that as barely possible," conceded the wolf-face, again consulting the chart. "He does seem to have some of the qualifications. Love of dumb animals, pronounced. Very good, so far. Misanthropy, extreme. Also very fine! Propensity for adventure, exceptional. Better yet! Disdain for A-urian civilization, enormous. Devotion to Panamic civilization, capable of cultivation."

IT was in silent astonishment that I heard this summary of my traits. Was the General only jesting? Or could there be some mistake about the blood-tests? Never had I thought of myself as an extreme misanthrope; nor had I shown any love of dumb animals; nor any except an accidental propensity for adventure; nor any disdain for A-urian civilization, since I knew nothing about it; nor anything except bitter hatred of the civilization of Panamia.

But the wolf-face seemed to place complete faith in the scribbles on the chart. That the latter readings pleased him was evident from the happy grin he wore; and that I might yet escape execution seemed probable when he bade a small-head look up my record card, and, having secured it, he gave a close scrutiny to the Section Commander's report.

"Your record in the Insect Basements," he declared, "reinforces the evidence of the blood-tests. Your breeding of super-flies proves your love of dumb animals. And your bravery when faced with the scorpion demonstrates your propensity for adventure."

"Another testimony to the accuracy of science," put in the large-head, with a pleased smile.

Disregarding this remark, the General continued, "The only thing that troubles me is that your military loyalty and your skill in prevarication are so low. Yet these, like your devotion to Panamic civilization, can no doubt, be cultivated. A few applications of our super-glandular hypodermic should stimulate the endocrine secretions and make you more loyal, as well as more given to fabrications. Do you not believe so, Colonel?"

"I am sure of it," asserted the Colonel.

"I suppose, then, that settles it," the wolf-face decided, turning to me with a smile no more pleasant than his scowl. "You are appointed to the Department of Insect Distribution."

Seeing that I received the announcement with a blank stare, he explained, "This, as you know, is a division of the Secret Service. Your duty will be to distribute damaging insects over the enemy's territory. You will operate from an airship, and without companions. It is a very risky and therefore a highly honored branch of the service. If you survive—which is to say, if you are not caught and executed by the enemy—you will probably be rewarded with a medal."

I listened in silence, for the prospects did not seem alluring.

"You will be given a two weeks' course of intensive training," proceeded the General. "Following that, you will be provided with insects and will be ready to go to the front. You will then have the title of Lieutenant of Insectry."

"Lieutenant?" I gasped.

"Yes, we give that honor to all the lower members of the Insectry, to compensate them for the hazards of their trade."

Whereat, turning to a small-head, the wolf-face directed, "Sergeant, will you see that the recruit is taken to the Distribution Department? Tell the Major that I have detailed him for immediate service."

And once more I was led away toward unknown adventures and perils.

## CHAPTER XV

### At the Front

**D**URING my two weeks of training in the Distribution Department, I devoted my time largely to the problems of aviation. I was expected to pass hours of practice each day with one of the military airships—a machine which, I found, was only a little more complicated and more difficult to manipulate than an automobile. Accompanied by a small-headed pilot, I was even permitted to make flights within a few miles of the Training Camp; and thus, aided by a natural mechanical aptitude, I was not long in becoming master of the flying mechanism. My superiors did not seem to doubt that, at the end of the two weeks, I might be trusted to undertake expeditions on my own behalf.

Meanwhile, as the wolf-faced general had prescribed, I was undergoing treatment for my military loyalty. Once every three days—five times, in all—I had to receive a hypodermic in my arm, the only visible effect of which was to produce an inflammation and a swelling. On each occasion the pain endured for hours, resulting in a headache which kept me awake during the ensuing night; and, far from improving my loyalty, the treatment made me curse and mutter secretly, railing against the masters that ordered such needless torment.

Yet, after the last of the five doses, my captors viewed the results with satisfaction. They made another blood test, which demonstrated not only that the red corpuscles were less plentiful but that the loyalty secretion was more abundant; hence they declared that I was now a true soldier, and might prepare to leave at once for the front.

Despite the perils that awaited me, I had only one real regret at my approaching departure. This was that, in journeying thousands of miles to the battlefield, I would widen my distance from Luella. True, the separation was already virtually complete: her letters, received regularly once every ten days, evidently owed themselves not to her but to Censorship; while my replies, devitalized in order to please the censor, were far from a pleasure to write and could hardly have been a joy to read. Still, I had the satisfaction of knowing that she was not many hundreds of miles away now. It would be different, though, when whole oceans rolled between us! Should I ever be able to re-cross the abyss?

It was on Luella's account that a deep oppressive sadness filled me on the day of my departure. I did not share in the delight of my fellow recruits when five hundred of us were crowded into one of the long, fish-shaped, covered airships designed for transoceanic

travel; I did not join in their shouts of joy, their songs of acclamation; nor could I understand their exultation as we glided into air and began our rapid voyage eastward. Two days were to be occupied in the flight; flying at a speed of one hundred and fifty miles an hour, we were to describe all varieties of curves and zigzags in order to escape hostile scouting cruisers; and we were to steer for some point described vaguely as "on the northern front"—though whether in Europe or in Asia I could not guess.

If I had expected exciting adventures, I was to be disappointed. The two days passed almost without incident. Once, it is true, my companions, crowding eagerly upon the deck, pointed to where a scrap of gray wreckage, tossing on the waves far below, was all that remained of one of our fellow transports; and once the hair-raising alarm rang forth that we were pursued—an alarm speedily quelled, for what had been mistaken for an enemy craft proved to be nothing but a wisp of fog against the horizon. But except for these trivial incidents, there was little to vary the monotony of the slow-passing hours; most of the time, we could not even regale ourselves by peering at the waters, because, for the sake of safety, we had to fly above the clouds; and we did not even know when we reached the European coast, for it was hidden in mist.

**B**Y night our voyage was particularly depressing; we traveled without lights, and there was something eerie about the swift purring movement of our long dark machine through the unfathomable blackness. And it was by night that we came to earth—by night, in some vague lampless place where shadowy forms moved whispering amid a stealthy gloom. How, I wondered, had our captain found his destination?

But, being under strict orders not to speak, I made no mention of my thoughts. All I did was to join the mob of my fellows, as, at the leader's hushed command, they swarmed out of the airship and down a long, curving path between the dim walls of monstrous buildings. We must have walked a mile in this fashion, though there was no way of reckoning distance; then we passed through a great, dark doorway, along an unlighted corridor many yards in extent, and through a second door—to be startled by a blaze of light.

To our astonishment, we found ourselves within an enormous hall. It was windowless; the bare, unplastered walls were of rude, recently sawed plants and timbers; the lighting was by means of electric orbs, strung haphazard along the ceiling. No trace of furniture was to be seen, with the exception of scores of filthy-looking little mattresses that covered half the floor space; and everything appeared so mean and uninviting that I could not imagine where we were, though the impression flashed on me that I was back in prison.

A more definite explanation was furnished by a small-head known as "Captain 45,618 BZ," who stood at one end of the hall conferring with our commander.

"You are now at the front," he informed us, raising his voice so as to be heard by all, and reading from a printed document. "You have arrived safely at the field of battle, and will henceforth make your headquarters in these barracks. You will sleep here to-night, and tomorrow you will be assigned to duty. Meantime, however, I must warn you of the precautions you must all take while you remain here. You must never show a light in the open, nor go into the open at all by day, for we are now in the enemy's territory, and our barracks must not be discovered. I need hardly remind you that they are covered with earth and grass above, so as to render them invisible to scouting airships.

"Again, I must warn you never to speak except in

whispers when in the open—and then never unless imperatively necessary, for the enemy's radio-magnifiers gathering the sound of your voices from a distance of many miles, will also gather all the information necessary for our destruction. The walls of these barracks, of course, have been rendered immune to radio transmission by an anti-vibration treatment, at a cost running well into the millions."

The speaker paused and looked up from his paper; then sternly added, "Infringement of any of these regulations, it goes without saying, will involve the usual penalty."

And, by way of conclusion, he pointed to the mattresses, and read, "You will now avail yourselves of these sleeping-accommodations for the remainder of the night."

**I**NSTANTLY there was a rush for the favored positions. I was astonished to see how the small-heads tumbled over one another, shoved and pummeled one another, hurled one another aside in the dash to be first. In this mêlée, however, I took no part, being content to secure whatever place was left; and thus I saved myself many a bruise and ended by finding a mattress which, it seemed to me, was as good as any of the others.

When finally we had all found our sleeping-quarters, the small-head in charge pressed a button, and we were plunged into total darkness. This should certainly have been conducive to slumber—but alas! though exceedingly weary, I was to gain little repose that night. Sheer good taste forbids me to report in full what I endured during those horrible hours; but, since this is a truthful narrative and aims at nothing if not at frankness, I cannot wholly forbear mention of that which beset me. Long, long ago, in the twentieth century, warriors wading amid the mud of the trenches, used to regard the attachment of little six-footed visitors as but a matter of daily routine; but I could not now adopt any such philosophic attitude, when I felt the presence of uninvited creeping guests. And oh, how uncannily they could crawl! and how venomously they could bite!—unlike their forebears of the twentieth century, they were not mere insignificant mites that could be crushed between one's fingers; they were hale and hearty creatures, inches in length!

"The damned A-urians! This is their work!" I heard one of my comrades mutter, as he tossed and writhed on an adjoining mattress. And, questioning him during a momentary truce with the unseen foe, I heard his view that the insects had been deliberately planted among our munitions of war by spies in the enemy's service. "At any rate, we plant them among their supplies," he explained. "And so it's reasonable to suppose that they do the same to us."

Here his conversation was punctuated by an interjection that is unprintable, and by a vigorous but apparently unavailing slap at his side. Then, half to himself, he continued to mutter, "Those damned A-urians! They fight like worms!" Those damned, damned A-urians!"

When at last the renewal of the lights announced to our sleepless crew that morning had come, there was one wish that I was repeating fervently over and over to myself: that I might be taken anywhere, anywhere at all, away from these verminous barracks. And that wish, though not openly expressed, was granted almost at once. After we had had our breakfast, capsules and water, we were all assigned to various parts of the dismal-looking windowless barracks; and one of the first to be attended to was I.

Following a guide down an underground stairway

and through a labyrinth of long electrically lighted corridors, I at length found myself face to face with an officious small-head. Unlike most of his fellows, he was not garbed in a simple uniform of black and red; there were golden ribbons dangling from his sleeves, and his breast was a solid mass of medals, some of them larger than his head. So numerous, indeed, were these decorations that his broad chest could not contain them all, and many had to be pinned on behind, making a resplendent display whenever he turned his back.

Of course, I was greatly impressed by this exhibition, but was somewhat surprised to hear the small-head addressed as "Major"—for, judging from his decorations, I had imagined that he was at least a general. Subsequently, however, I learned that his rank had nothing to do with his honors, which had been awarded for personal gallantry in the Malaria Squadron—many years before, in a single-handed foray, he had invaded the enemy's territory and made prisoners of not less than forty-three blood-sucking mosquitoes. There was now one medal for each of the captives.

But, still knowing nothing of such valor, I could only gape at his adornments in admiring wonder, while listening to him pass judgment upon me.

**W**ITH an air of studied judicial dignity, he glanced over my papers, then in slow and sonorous tones rendered verdict: "Having had the care of a termitarium, you seem well suited to the termite branch of the service. You will accordingly be given charge of a termite car."

"What is a termite car?" I had the boldness to inquire.

"Just a minute, and I'll tell you!" he snapped, impatiently, upset by so unwarranted an inquiry. "You should know without asking!"

And he fished about on his desk for a blue printed document, which he began to read aloud, after the usual practice of the small-heads when they had more than a sentence or two to deliver.

"The termite car," he then notified me, in the decisive tones of one who knows, "is an airship containing ten thousand male termites and ten thousand females, which are to be distributed in equal numbers in various parts of the enemy's territory, so fostering an epidemic of these most destructive insects. The driver of the car will scatter them in those places most favorable for termite propagation, and will not return to headquarters until he has exhausted his supplies. In the case of the present barracks (Number 130 EY), the driver will set forth in a northwesterly direction, as indicated by the compass, and will scatter the insects over a trail twelve hundred miles long. Each expedition should last about five days."

"There, you see," said the small-head, turning to me with a knowing smile. "Now you've found out all about it. I shall therefore assign you to your special car, and give you the booklet of directions for your further guidance."

My car, which I was permitted to inspect immediately, turned out to be similar in most respects to the little airships which I had already seen and learned to drive. One important difference was that the driver's seat was completely roofed in and covered with heavy glass; another difference was that there was a tank to contain fifty gallons of "Merthol"—a concentrated fuel many times as powerful as gasoline; a third point of distinction was that there were two cases laden to the brim with three-inch termites, which might be released a few at a time through a narrow funnel-like aperture. Aside from this, the

only feature of novelty was an automatic device for providing capsules and water half a dozen times a day during a trip of not over six days.

As soon as I had inspected the machine, I was provided with the booklet of directions. "You may pass the rest of the day in reading this or making any other necessary preparations," I was instructed. "At midnight you will set forth upon your expedition."

Seated upon a pile of straw at one corner of a great barn-like barrack, I spent several industrious hours in company with the booklet. Truly, it proved a mine of invaluable knowledge! It told me much that I most desired to know—how, for example, I must guide my flight. "Fly due northwest, according to your compass," I read, "and continue until the speedometer registers twelve hundred miles, pausing every one hundred miles to distribute termites. Try to travel as much as possible by night, and to find some secluded resting-place by day. Upon your return trip, if you take care to follow the compass due southeast for twelve hundred miles, you should have no difficulty in getting back to your barracks."

This sounded simple enough—but not all the information provided by the booklet was equally encouraging. For example, I was not cheered by the paragraph entitled "Splendid Record of Panamanian Insect Distributors in the War of the Biting Ants."

"In the so-called War of the Biting Ants, which glorified the latter half of the one hundred and twentieth century, the Panamanian Insect Distributors made a record which may well stand as cause for pride for generations to come. During the thirteen years of this conflict, five million distribution cars set out from the various barracks, with a cargo estimated as in excess of forty-two billion venomous insects of one hundred and fifteen species. Of the five million cars that put forth, almost two million succeeded in eluding the enemy and returning safely to their base."

ALMOST two million had succeeded in eluding the enemy! Over and over again, in growing apprehension, I read those telltale figures. This was a record to be proud of!—yet more than half of the aviators had not returned! What of the other three millions? What of the other three millions? I kept inquiring of myself; and the pictures that I drew of their fate were not such as to charm the fancy. And it was with quivering pulse and a sinking heart that I faced the reality and told myself how enormous were the chances against anyone of my inexperience.

But had the missing ones all perished? It was unbelievable that they had; yet, on this point as well, the booklet offered definite information—and information that was far from reassuring.

"The majority of the lost aviators doubtless fell into the hands of the enemy," I read. "And A-uria, our foe in that war, as in the present struggle, is remorseless in her treatment of captives. Reports of an unassailable character, pouring in from scores of sources, prove that she has habitually violated the Rules of International War, as drawn up at the Seventeenth Vague Conference of the one hundred and twentieth century. Instead of preserving the lives of her prisoners, and herding them humanely into prison camps and dungeons, according to the time-honored and respectable practice, she has executed millions of our unoffending sons. Worse than that!—she has put them to death by antiquated and barbarous methods; rather than subject them to a painless process of asphyxiation, in the manner she applies for the benefit of diseased insects. She has outraged the feelings of mankind by unmentionable atrocities. She has had her

prisoners shot, or hanged, or beheaded, or—worst of all—electrocuted! Against a foe so utterly savage, only a battle to the death is possible."

Having read this passage, I vowed that I should never be taken alive by the A-urians. I felt sure now that the Panamanians' hatred of their foe was justified, and I began to feel something like hatred myself, for I pictured them as ferocious and bloodthirsty barbarians.

IT was while I was brooding upon the infamy of A-uria that a horrifying spectacle met my eyes. A group of about twenty small-heads, tied by stout chains into a compact mass, were dragged past me in a wailing, screeching band, with bestial oaths and frenzied shouts and bawlings that might have rent the heavens, had there been any heavens to rend. Their stout muscles were strained furiously but unavailingly against the irons that bound them; their tiny lynx-like eyes stared from their sockets with a look of such rage and agony as I hope never to behold again; pleading and terror and insane wrath and despair seemed to mingle in their tormented chorus, as scores of their fellows pulled them, helplessly struggling, across the barracks and out of view along a black corridor.

Even after their moans and mutterings had died away, their mad tumult echoed dolorously in my mind. I could not put them out of my memory; and I knew no rest until I had found the opportunity to inquire who they might be.

"Oh, pay no heed to them," advised the small-head whom I questioned; and he shrugged his great shoulders contemptuously. "They do not deserve your sympathy. They have been found guilty of insubordination. They were being led to the asphyxiating chamber."

"You mean—that they—"

"That they are being disposed of mercifully," he assured me, without emotion.

"But, in heaven's name, what have they done?" I demanded.

"Who knows what they have done?" Again he shrugged disdainfully. "They have been found guilty of insubordination—is that not enough? Perhaps one has talked back to an officer. Perhaps another has breathed aloud when on guard duty. A third may have whispered when on parade, forgetting the motto, 'Privates should be seen, but not heard.' There really is any number of things they might have done. But why worry about them? They have been found guilty—and they are only privates, anyway," he concluded, proudly scanning the red breast-star that proclaimed him a corporal.

"But, certainly, such executions are not frequent?" I inquired.

The small-head stared at me as one might stare at a child who has asked some preposterous question.

"This is war, is it not?" he tossed out, as though that were sufficient answer. Then, in more matter-of-fact tones, he added, "Executions are held every day, of course. The rules require them. They are necessary to keep up discipline. The more the executions, the better the discipline; the better the discipline, the more the executions; executions thrive on discipline, and discipline on executions, and it is the pride of all commanders to have plenty of both."

I stood abashed before this exhibition of logic. But, being still avid of information, I decided to put another and somewhat different question.

"You speak of commanders," I said, "but I don't see any around here. No higher commanders at all—"

nothing but small-heads. Where are all the large-heads and wolf-faces?"

Once more my informant peered at me with a superior smile, as if now convinced of my idiocy.

"Where do you think the commanders are?" he flung back. "Don't you know anything about the rules? Don't you know that the law forbids them to risk their lives? Why, didn't you hear what happened only last week to one who ventured within five hundred miles of the front? He was court-martialled for recklessness!"

And having offered me this final bit of knowledge, the small-head stalked away contemptuously, leaving me to reflect upon the curious Panamian methods of warfare.

The rest of the day passed without event. In anticipation of the ordeal that awaited me at midnight, I managed to secure a few hours of fitful slumber on my pile of straw; and so, when the time came for my companions to retire that evening, I was not sleepy at all, and did not attempt to deprive them of any of the mattresses. But I observed that none of them made a dash to secure mattresses that night.

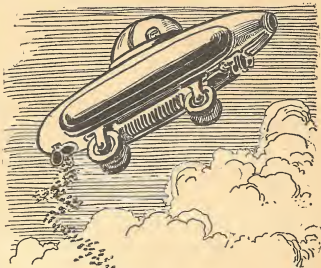
JUST before the lights were turned out in the sleeping quarters, a small-head led me into an adjoining room, where my airship stood fully equipped, ready to be pushed up a long incline into the open at the stroke of midnight. With the aid of the small-head, I busied myself once more in inspecting the mechanism, but was interrupted by the passage of a band of recruits lately arrived from Panamica.

These recruits were of importance to me because they bore with them several bags of mail—one of which contained a letter for me. A letter for me, needless to say, could come from only one source!—and even though Censorship had intervened with defiling hand, I could not but tear open the envelope eagerly and glance with ravenous eyes at the contents.

But, for the second time, I read one of Luella's letters without pleasure. And, on this occasion, it was not the lack of information that most distressed me—it was the presence of information of too definite a nature.

"Dear Friend," I read, "A great honor has fallen upon me. The Section Commander has been kind enough to select me as one of a few women to leave

the Insect Basements and work in a Munitions Factory. My duties will be connected with the manufacture of sting-protectors for use in insect warfare. I am to leave at once. Military necessity, however, for-



Imagine multitudes of marching ants, each one-half foot long—ants that move in compact phalanxes, scores of yards across and miles in length.... And in their midst there trudged a few scattered men that might have come straight from the pages of a medieval story-book.

bids me to say where I am to go—to what city, or what country, or even to what continent. Military necessity, likewise, forbids future correspondence. Farewell, my friend. I cannot say when I will be able to write to you again. Forever yours, Luella."

The reader will be able to imagine my state of mind after I had finished the letter. If I had read my own sentence of execution, I could not have been more amazed, more shaken, more appalled. And so Luella was to be removed from the Insect Basements! To what new torments and trials was she to be sent? And where was she going? When should I see her again? When would I have a line from her? How would I learn of her location? Was I not cut off from her completely?—as completely as though she or I were sent to some other planet? And was not all then over between us? Was not our brief, sweet romance over?—broken by a separation little less absolute than that of death?

One might be philosophic, if one will; one might proclaim that it was one of the normal incidents of war—something which might have happened time after unrecorded time in the conflicts of thousands of years. One might proclaim that I suffered as multitudes have suffered in all the ages before me, and that so frail and human a thing as love could not expect to withstand the cosmic tides of combat. One might proclaim all this, and he would no doubt be right—but I, in my agony and despair, could arrive at no such philosophical conclusion. I blamed, not war itself, not even a particular war, but the Section Commander, whose malice seemed responsible for Luella's removal and my woe; I blamed Censorship, which withheld the facts regarding Luella and slammed the door upon our future correspondence; I blamed A-uria, whose iniquitous conduct made necessary the Censorship and the fighting; I blamed—

"Three minutes before midnight! Time to set out!" bawled a heavy voice, before I had finished my blaming; and, sharply recalled from my reverie, I wheeled about to face a small-head who had just flung open the door of my airship.

Still somewhat dazed, and feeling like one who walked in a dream I entered the car.

But I returned quickly enough to the matter-of-fact world as the door snapped to a close upon me and I felt the car being hauled up the long incline into the open. The next instant my fingers were on the steering levers, I had pressed a button that made the whole machine throb and vibrate with some unseen power, and, almost before I was aware of it, I had gone shooting forward with a vehement lunge and was gliding swiftly and easily through the spacious blackness beneath the stars.

## CHAPTER XVI

### Through the Air

GUIDED by an electrically lighted compass and steering mechanism, all else being left blank, I flew for hours in a northwesterly direction across a vast, dim plain. Twice I halted in mid-air to release some winged termites; but no other interruptions disturbed my flight across that world of shadows and vague distances. In the main, the landscape beneath me was featureless, though now and then I saw a cluster of twinkling lights which I tried to avoid; and once I distinguished some jutting eminences that, in the faint starlight, at first appeared to be a range of tall hills. But closer inspection showed that it was a group of man-made towers, a mighty city like that in which I had been imprisoned. Yet this was

a city of the barbarous A-urians! No lights, however, glared or blinked from its gigantic expanse; and I wondered whether it had been darkened purposely to shield it from air attacks, or whether it could be but a city of the dead.

But I flew on without pausing; and dawn found me still speeding across the open plain. In accordance with directions, I should now have sought a resting place and waited for night; but the land beneath me was so bare and harmless-looking, and at the same time so fascinating, that it was long before I thought of following the way of caution.

Yet its interest was the interest of desolation. In places there were wastes of rock and torn earth horribly ploughed up and furrowed, and without the sign of a growing thing; in places there were the remains of forests, the trees standing grim and leafless, the very bark stripped away and the naked wood protruding in decaying masses. And here and there some great rusted metallic structure, bent and twisted till its original nature was a mystery, would gape up at me like some testimonial of calamity; while once, when I came across a patch of green land by a river, I flew low enough and slow enough to see that the verdure had formerly been much more extensive; and I distinguished a multitude of enormous insects, evidently of the locust family, which were greedily consuming the remaining foliage.

But these were not the only insects that I observed. From time to time I encountered some soaring creature, five or six inches long, which charged my windshield with such force that I marvelled that it did not shatter the glass; and once my flight was impeded by a swarm of lean-bodied flies, which I recognized as hornets. From their presence, I concluded that I could not be far from the battlefield, for I knew that they were esteemed as fighting insects of a high order.

Had the most elementary caution now moved me, I would have sought shelter and not have stirred until evening. But I was not in a cautious state of mind; I was curious as to what might be seen; besides, since receiving the letter from Luella, I was beyond caring very much what happened to me. It is sadly to be feared, moreover, that the Reduction Department had not sufficiently limited my individuality, for otherwise I should surely have obeyed orders.

Yet my recklessness was not without advantage. Because of my disregard for instructions, I was to gain vastly in experience. And I was to be offered a glimpse of warfare such as I would never have thought possible. In theory, of course, I already understood a great deal about the then current methods of fighting; but no theory could have described to me the reality as I saw it, when I caught my first glimpse of the Legionary Ants. Imagine multitudes of marching ants, each half a foot long—ant\* that move in compact phalanxes scores of yards across and miles in length, deploying and maneuvering like the members of a human army. And imagine the ferocious looks of these creatures, with their red bodies and huge vise-like mandibles, which having once seized any living thing, will never release it; imagine the impression they make as they speed across the ground at the pace of a rapidly walking man, never pausing and never turning back, as though they were the slaves of some sinister and inscrutable purpose.

IN their midst—and this, to me, was their chief point of interest—there trudged a few scattered men that might have come straight from the pages of a medieval story-book. Each of them was clad in armor; the head and eyes were totally concealed beneath a

pointed helmet with glass spy-holes; the breast was hidden behind a burnished cuirass; stout cuisses and greaves\* covered the legs, and spurs glistened at the heels; while not one square inch of the entire body remained unprotected. The exceptional size of the men, and the unusual narrowness of their helmets, proved them to be small-heads of the military species, and this in part explained why they were able to endure the weight of their mail; but, beyond this, I knew, from wearing armor in the insect cages, that the metal was thin and very light by comparison with that used in the Middle Ages.

Discarding my last slim remaining shred of caution, I flew only a slight distance above this remarkable army, inspecting it at my leisure. I was surprised to note that no one seemed to pay any heed to my presence; but, at the same time, I realized that the small-headed warriors were trained not to observe anything they were not commanded to observe. I was relieved, none the less, to behold the worm-shaped red banner of Panamica, and to know that I was not within range of the enemy.

Suddenly my attention was attracted to a mist on the northwestern horizon. Flying in that direction, as both duty and curiosity required, I watched a mysterious patch develop to the dimensions and general appearance of a thunder cloud. Yet evidently it was not a thunder cloud. The far-off buzzing, whirring, rasping sound that issued from it was not the sound of thunder; nor did any lightnings stab the heavens. Gradually, as I drew close, it began entirely to lose the aspect of a cloud; it resolved itself into a multitude of tiny, black circling particles, innumerable as the sands of a sand-storm and as rapid of motion as a cyclone.

Terror-stricken before this inexplicable tempest, I swerved aside abruptly—and it was well that I did so, for with a horrible droning and a roaring as of a great wind, the black storm went careering past. Some of its outlying fragments struck against the sides of my car, others smashed violently against the glass that walled me in; but, even amid my alarm and mad confusion, I was able to recognize what they were—giant winged insects with the general aspect of bees or flies.

No sooner had this bewildering multitude swept past than another and still more amazing sight struck my eyes. Beneath them marched a human host, serried rank after rank, company after company, legion after legion, stretching away to the far horizon. I had not known there were so many men on earth; their sheer numbers were a cause for consternation; they were to be counted only by the square mile! All were stout of limb and small of head, as befitted men of the military species; all moved with a mechanical regularity suggesting that they were the component cells in some vast organism; all wore goblin-faced gas masks, and carried metallic cylinders that I recognized as asphyxiating tanks; all were clad in armor in front, but wore nothing at all behind, as though by way of reminder that, should they turn their backs, they would be immediately vulnerable.

In the midst of this horde I suddenly noticed a waving bright yellow banner, cut in the likeness of a centipede. And, seeing it, I shuddered, and was on the point of flight, for this was the emblem of A-uria!

But I restrained my fears, for I noticed that no one seemed to be paying any heed to me; and curiosity counselled me to fly above the army as it pursued its way to the southeast. A rash course, no doubt!—but I was to be rewarded for my audacity; it was on this

day that Panamica and A-uria fought the Battle of the Desolate Plains—merely a skirmish as battles went in this super-war, and yet sufficiently imposing to impress one of my inexperience.

I AM not able to report in detail all that I witnessed; I merely recall in general how the A-urian army of small-heads clashed with the Panamian army of ants, and how the valor of the men was a sacrifice before the vigor of the insects. Something had probably gone wrong with the A-urian plans, for the millions of flying insects which had been released were not as well disciplined as they should have been; they could not distinguish between friend and foe; they made no assault upon the armor of the Panamians, but dug their stings into many an unshielded A-urian back; they conducted no offensive against the Panamian ants, but, when they could not find human victims, they were content to wander over the countryside wherever they would and not to fight at all.

But no such tendency to shirk was displayed by the ants. They were warriors, every one of them, from the tips of their antennae, to the rear extremities of their chitin armor; and they conducted themselves as good warriors should. When they came in sight of the enemy, they did not flinch; they marched straight ahead, without any variation in their pace, as though they knew no such thing as fear; and they launched themselves upon the foe with an energy that Panamian dispatches described as "dauntless."

It was with horror and astonishment that I beheld their assault: the leading A-urians, upon their approach, drew forth the metallic cylinders and began to spray them with asphyxiating gas; but though some fell, many more continued undamaged on their way, and other multitudes, and others, and others still, advanced in inexhaustible columns to take the places of the fallen. Soon the swarms of ants had mingled with the companies of small-heads; soon, abandoning their soldierly regularity of formation, the foremost insects were fighting as individuals; each attached itself savagely to some man's ankle, leg or thigh, and held on so tenaciously that the mandibles would remain embedded in the flesh even though the head had been torn from the body.

It was marvelous to note how swiftly the orderly A-urian legions became converted into a terrorized mob. I would have thought that so vast an army would prove unconquerable; but against the onslaught of the ants it could not stand for ten minutes. After the first attack of the six-footed terrors, the machine-like regularity of the A-urian formation began to vanish; the lines commenced to tremble, bend and waver like iron rails warped by an earthquake; here and there, and everywhere, the small-heads were seen to struggle out of the ranks, wrestling with small foes that struggled up their legs and backs. The ground beneath them was streaked with red; the heavens above were rent with their cries; some, like bewildered cattle, bolted and stamped, plunging pellmell they scarcely knew whither; others, shrieking with dread, joined in their crazy flight. Then, like a raging fire, the panic spread to quarters first near and then far; squadron after squadron, legion after legion, joined in the precipitate retreat; soon all that vast army, as by one mad, desperate impulse, turned and dissolved into a multitude of shrieking, racing individuals.

And tumultuously from the Panamian lines there rose a chorus of triumph. And the mailed warriors removed their helmets and in husky voices acclaimed the ants. For the insects had won the day!

The issue of the battle having been decided, I con-

\*The Cuisse is plate armor to cover and protect the thighs; greaves do the same for the leg from knee to ankle.

tinued my flight in the prescribed northwesterly direction. Glancing beneath me toward the battlefield, I could distinguish the forms of a few A-urian warriors who had not been so fortunate as to escape—men who, impeded by their armor or trampled to earth by their fellows, had been overtaken by multitudes of the ants. Though they were A-urians, my sympathy went out to them as I saw them writhing on the ground, swaying spasmodically to all sides, groaning and unable to rise, while over them swarmed the devourers in thick columns. Here and there one of them had ceased to struggle, but lay silent with sprawling limbs, over which the insects surged ravenously.

Anxious to escape such ghastly scenes, I flew ahead at full speed, and soon had put the battlefield behind me. It now came to me suddenly that I was tired, tired to the point of exhaustion; I must waste no time about seeking a resting place. Since the country about me was scarred and deserted, with innumerable rocky eminences and depressions, my quest was not a difficult one; it was but a few minutes before my machine had alighted in a bouldery ravine, protected from observation by high beetling walls.

**I** WAS just about to step out and look for a comfortable sleeping place, when my attention was attracted to a long gray creeping creature that stole in and about among the rocks. Though I saw that it was not a serpent, I felt that it was not an animal that invited close acquaintance; hence, with mind obsessed with visions of scorpions and centipedes, I decided to secure what rest I could at the driver's seat of my car.

So fatigued was I that, even in this comparatively cramped position, it was not long before I fell asleep. For a while my memory kept forming disturbing pictures of the day's events, and I marveled vaguely that I had escaped untouched; then I fell into a series of distorted dreams, wherein ants as large as horses covered all the earth and reached even to the skies; then deeper slumber and unconsciousness overcame me, and the hours were blotted out as my wearied senses recuperated from the exertions of days.

But once again—much later, it seemed—I had a dream, one of those strikingly clear-cut and unforgettable dreams that come inexplicably now and then to startle us from the depths of the unknown. Suddenly, as plainly as though they were bodily present, I thought I saw Luella standing before me; Luella, as I had seen her last, and yet somehow strangely changed. Her arms were stretched out toward me as though in pleading; there were tears in her eyes, and tears rolled unchecked down her cheeks; her beautiful countenance was drawn up into the most piteous, sorrowful expression I had ever beheld. She did not speak, she merely stared at me entreatingly; then slowly, eerily, began to fade, like a mist, like a wraith, until there was only blackness where she had been.

With a start I opened my eyes; the world about me was dim with the evening. My voice, unbidden, framed the murmured word, "Luella!"; I put a hand to my cheeks, and found that they were moist. Shaken and profoundly sad, I sat staring into the gathering darkness; the longing for Luella had come to me with an obsessing force. In some weird way that I cannot understand, I had at that moment the conviction, stronger than reason, as strong as knowledge itself, that she was in trouble, that she was weeping, that in her distress she was turning mutely to me and helplessly invoking our love.

And a great desire came to me to take wing and fly to her, to fly to her straightway across the whole un-

friendly world. But how could I reach her? I did not know where she was!—perhaps I would never know! And as this realization came to me, my head sagged forward with a despairing lurch; and, for the first time since childhood, my shoulders heaved and shook spasmodically.

When at last this outbreak had died down and I sat gazing moodily out into the blankness of night, I was assailed by an impulse of a different kind. Is there in the subconscious mind some undefined protective sense, which receives subtle intimations of danger and flashes the warning to our consciousness? Or was it merely that in my lonely, dismal retreat, and in my lonely dismal mood, I was preternaturally inclined to take fright at shadows? Whatever the explanation, I know that fear did come to me, and almost overwhelmed me. For no apparent reason, I was suddenly terror-stricken. I trembled and shuddered, and peered into the blackness in unreasoning alarm; had there been a light, my face might have been seen to go pale. Yet there was no visible cause for consternation. The darkness was complete and undisturbed; all about me were shadows, still and unruffled, no single object distinguishable in the opaqueness of the cloudy night; and the silence that blanketed the world was like the silence of the tomb.

Yet terror is no thing to reason about. I was in the mood of one who, walking near a graveyard late at night, suddenly becomes convinced of the presence of ghosts. My one impulse, my one desire, was to flee—anywhere at all—only to flee without further loss of time. In my panicky dread of I knew not what, I fumbled for the levers, for the steering apparatus of my car; then, not daring even to turn on the lights, though they were shielded from outside view, I found the button that switched on the power; and while the motor, purring and throbbing beneath me, beat less tumultuously than my raging heart, I felt my car rising slowly and perpendicularly into the air.

In my excitement, I scraped the edge of the cliff as I rose, but fortunately I did not damage my craft. The next instant, free in unimpeded space, I turned a knob that sent me gliding horizontally with bullet-like speed. And, with a long sigh of relief, I told myself that I had escaped the unknown peril.

But had I escaped? What was that low swishing sound behind? With a rush of returning terror, I strove to accelerate my flight, while I listened with straining ears for the vague, indefinable murmur. Surely, I had not been mistaken! The swishing continued, but louder, less confused, as though it were constantly drawing nearer! And in my mind there flashed the picture of some dark pursuing form.

Even as this dread fancy came to me, my eyes beheld that which put an abrupt end to all doubts. Out of the featureless blackness behind, there suddenly dawned a brilliant light, glaring with a hard concentration of white fire; then other brilliant lights, to the number of a score or over, rose unexpectedly as meteors out of the obscurity of the skies. All were in motion, all darting toward me through the air with incredible swiftness; and from the bright point of each, a long illuminated streamer shot forth, sweeping and sweeping the heavens with unearthly searchlight eyes.

**I** WAS now traveling at my utmost speed; but I still strove distractedly, unavailingly to increase the force of my trembling motor. I felt as a dove must feel when pursued by a hawk; great as was my velocity, it was not great enough. With every second, the mysterious lights drew closer, the penetrating rays

searching and searching the skies in tireless loops and circles. Suddenly, to my utter consternation, one of the lights fell full upon me, fixing me with an appalling white blaze that clung to me mercilessly. I tried to evade it by following all manner of reckless zigzags and spirals, but it followed with identical zigzags and spirals, and not for one second could I avoid its rays.

In a few minutes, I was flying amid a swarm of lights. By their wavering illumination, I could see that each issued from a huge, dark, eagle-shaped hulk; worst of all, I was aware that these sinister forms were closing in upon me, impeding my flight and rendering escape impossible. Gradually they formed a roof above me and walled me about on all sides; then, since the only alternative was death in a flaming collision, I was forced to move as they saw fit, and by degrees had to decrease my speed and to glide earthward.

From that time forth, they controlled me as utterly as though their hands were on my steering mechanism. I descended when they wished, and guided my motor as they wished, and came to land where they wished, on a level open plane, while they alighted about my useless car as thickly as vultures about a carcass.

By this time I fully realized the futility of all resistance. In speechless trembling I waited while a small-headed figure detached himself from the largest of the airships and strode imperiously toward me. He was waving a banner which, in the bright lantern-light, I recognized as the yellow emblem of A-uria.

With laughter that rattled uncannily, he pointed to me, and instructed his companions, "Bind him hand and foot! He thought he could get away, I suppose? Those Panaman spies are not so clever, after all!"

While several other small-heads made haste to obey, I groaned and struggled as only a doomed man can, for had I not heard of the fate that awaited A-urian captives?

## CHAPTER XVII

### In the Enemy's Stronghold

**A** FEW minutes later, I had been gagged and bound and was again a traveler through the air. With manacled hands and fettered feet, I lay squirming on the floor of the largest of the bird-shaped airships. Where we were bound I did not know, but that we were flying at prodigious speed was apparent from the rush of wind against our sides. All was dark about me, except for the yellow glow that lighted the pilot's seat just above; and in my mind, as well, all was dark, for I was resigning myself as best I could to the doom that awaited me at the end of the flight.

We may have proceeded for hours; certainly, it seemed like hours, for the monotonous droning of the engine and uninterrupted roaring of the gale were for me as the slow voice of eternity. I scarcely cared, however, whether we paused early or late; and it was with no emotion, except a vague, weary fear, that I at length heard the motors throbbing to a stop and knew that we were spiraling earthward.

But once we had landed and two small-heads had picked me up and begun to bundle me away, the vague fear gave place to a raging, indescribable terror. I raised my voice to scream, but my cries were muffled to a hoarse muttering by the thick cloth between my lips; I sought to writhe and struggle, somewhat in the manner of a worm on a hook, but firm hands choked my every movement; I could only stare with gaping, impotent eyes into the darkness that seemed but to point the way to a greater night.

While I thus quailed before what appeared to be the

inevitable, I was borne across a shadowy open space and into the doorway of a dimly looming building, whose nature I could half surmise. Here, I thought, the execution chamber must be awaiting me; and as I made my unwilling entrance, I had visions of the ghastly transformations likely to occur before it was time to leave.

But evidently my captors were not to temper their punishment with a merciful swiftness. I had expected at least the boon of a speedy exit—and even this was to be denied me. Instead of leading me directly to my ultimate release, they were to play with me like a cat with a crippled mouse. So, at all events, it seemed to me when, having hurried me down a red-lanterned corridor, they dropped me into a small unlighted room, relieved me of shackles and gag, and slammed the door behind me.

Half stunned by this rude treatment, I groped my way hesitatingly through the blackness. I perceived that I was in a tiny cell, so narrow that my outstretched hands could touch both walls, and so short that I could stride from end to end in three short steps. The floor was of some hard polished substance, evidently stone; the walls were of stone, and I could reach the stone ceiling when I stood on tiptoes; while the door, of some firm, cold metal, was securely locked and held no promise of escape.

Months before, when I was imprisoned in the city of steel towers, I had cursed and raved and beaten at the door with furious, unavailing fists; but now, better schooled in suffering, I did not storm and mutter at my fate, though I might occasionally have groaned. I merely sat, head in hands, upon the floor, and tried to foresee what fate had in its keeping for me next. And the fruits of my musings were not hopeful. It was apparent that I sat in my death-cell; I would go forth only to face the last summons. But would I be imprisoned for days, or even weeks or months, before my foes wreaked final vengeance?

Or might not their final vengeance await me this very moment? How was I to be sure that my dungeon would not serve also as my execution chamber? With a burst of fresh understanding, I remembered the tales I had read of medieval tortures; of great weights descending from dark ceilings to crush defenseless victims; of floors slipping from beneath the prisoners, and long plunges to the watery depths; of lances thrust through black holes in the walls, and strangling hands that reached, as if from nowhere, to seize a cringing wretch.

**A**ND as I thought of the possible pitfalls that bristled about me, a cold perspiration crept across my brow; I suffered all the torments of the Inquisition, and endured death over and over again in incredible ways. All very well to pray for early release!—I shuddered, as most men shudder, at thought of the unknown, grisly darkness; I clung, with a miser's passion, to my miserable, worthless rag of a life; every nerve and sinew of me cried out in frantic longing to live, to live, to continue to live, though every breath I drew was anguish. Poignantly I recalled the good and desirable things the world yet held, the broad skies, and the green woods, and the tingling freshness of the winds, and—most of all—the light and consolation of two loved blue eyes; and, thinking of all this, and how I was to go from it all into the cold and the night, I could not restrain my emotion, but tears flowed unchecked along my cheeks, and from my throat there arose unbidden a deep, long-drawn moan.

I was sitting hunched upon the floor, with drooping shoulders and head sagging low, when I was startled

by the sound of a key rattling in the latch, and by the booming of a husky voice. And while instinctively I sprang to my feet, the door burst open and two small-heads stood revealed by the illumination of a flash-light.

At first, in the dazzling, unexpected radiance, I could scarcely see their faces; but I heard one of them utter the command, "Come!" and automatically I obeyed. For a few paces I slouched between them down the dim corridor, surprised not to be shackled again, yet filled once more with the sensation, unspeakably sharp and terrible, that my final moment was at hand. Had we had any great distance to traverse, I should not have been able to cover it unaided; my nerveless limbs would have sunk beneath me and my palpitating heart would have given out; fortunately, however, it was only a moment before we had passed through a second doorway and reached the end of our walk.

That end was such a surprise that it made me momentarily forget my fears. We had entered an enormous, vaulted hall, several acres in extent, and featured at one end by a row of queer triangular windows through which floated the pale light of early day. On a high throne-like platform beneath the windows, sat a bald and toothless individual of the wolf-faced species; while before him, and on all sides of him, and along every wall, were ranged stiff lines of military small-heads, their puny faces covered with gas-masks, their bravny bodies encased in armor.

But these were not the most striking occupants of the room. Those that most interested me were the members of a mob, thousands in number, who stood huddled in the center of the hall. Most of these also were small-heads, but they wore no armor; their clothes in many cases were torn and rumpled, their looks invariably were abject, pitiful, terror-stricken; they had the stupid, frightened looks of cattle in a round-up. Yet these were my fellows!

With cuffs and blows, my captors thrust me into the multitude; and there, after their departure, I remained for many minutes, restrained from thoughts of escape by the lines of soldiers that barred every path of egress.

Each instant the rabble was growing, disheveled small-heads being added by the score. All, I could see, were in a state of intense agitation, their great hands fluttering nervously, their limbs spasmodically twitching and trembling, their little eyes a-gape with terror. None spoke to his neighbor, but many were muttering to themselves; and what they mumbled was not entirely plain, though oaths and murmurs of alarm were not infrequent, and many a tongue seemed to be quivering in prayer.

WHEN finally the room had been packed so tightly that scarcely a foot of space remained unoccupied, a bell sounded from our rear with brazen clanging, and the wolf-faced dignitary began to speak.

"Where is the commander of the Night Scouts?" he shrilled, in the unpleasant tones common to his tribe. And, responsive to this question, a gigantic small-head of the laboring species stepped forward, and raised both hands in token of respect.

"Number 42,383 AY, I salute you!" he proclaimed, and lifted his hands once more as though in supplication to the heavens.

"Are you Number 118,600 CNS, new-made commander of the Night Scouts?" queried the wolf-face.

The small-head made deferential reply in the affirmative.

"And is this all your night's catch?" continued the official, pointing to the assembled mob.

"That is all. But it was my first night—" Number 118,600 began to plead.

"It is a very small catch!" snapped the wolf-face.

"How many?"

"Seven thousand, four hundred and eight," responded the subordinate, promptly.

"A very small catch indeed!" repeated the wolf-face. "Even worse than I thought! You will have to do better than that!"

"But if the quantity is small, sir, the quality is high," the small-head made meek defense.

"It does not look that way to me!" dissented the other, surveying the mob with a scowl. "What are they accused of?"

"Two thousand are spies. The others are all Insect Distributors. In almost every case they have been caught with the goods—usually some strange, new insects known as termites. These, of course, have all been confiscated. Their airships, when not destroyed in making the capture, have been added to our own Distribution Department."

"Any casualties?" continued the official, with less asperity.

"Three hundred for the enemy. One hundred and two on our own side."

"Very good!" The wolf-face sat musing, with a mollified expression. "One hundred casualties in one night, out of a fleet of twenty thousand scouting ships, is not bad at all. At that rate, we won't need another fleet for six months."

"Not unless the enemy's Distribution Department improves," amended the small-head. And then, with a gesture toward the waiting multitude, "What am I to do with the prisoners?"

"The usual procedure, of course!" decided the wolf-face, brusquely. "Clear them all away at once! I have other business to dispose of!"

And, while, in a burst of impotent rage, it struck me how callous it was thus to order a mass execution, the leader of the small-heads shouted an order, "Into the corridor!" and the soldiers began to herd us away like terrified sheep.

Driven by the irresistible armored lines, we were forced into a vast open court flanked by tall stone walls. Here half a dozen fish-shaped airships, each three-decked and a hundred feet long, stood in waiting like steamboats miraculously out of water. Into these we were compelled to make our way, crowding upon one another until we formed a compact mass; and so limited was the space, and so great our numbers, that the men kept thronging in after every visible inch of space was occupied, squeezing their fellows against walls and railings as though they were capable of indefinite compression. With the back of one small-head pushing against my chest, and the chest armor or breast plate of another jammed like a wedge against my back, I thought of nothing so much as of cattle in a box car; I experienced an old, almost forgotten sensation, and momentarily it seemed to me that I was back in the twentieth century, fighting for standing room in a subway express; while in place of the muscular, grim-faced small-heads I seemed to see a horde of hurrying clerks and pink-cheeked typists as they made their way down to Times Square on a working morning.

This illusion was fortified by the jerks and jolts of the ship before it rose into air, and by the sharp lunges and vibrations that accompanied the early stages of the flight. Yet fear mingled with the queer sense of familiarity—were not the engines being overstrained?—might they not burst and hurl us all to our death below? What, indeed, if the object were to dash us thus to destruction, and so save the trouble of a slow execu-

tion? Or what if we were to be plunged into some river or lake, and drowned like rats in a trap? Terror-stricken as I was, I could see no reason for the flight except some ingenious form of mass murder; and, as the craft continued to jerk, swerve and tremble, I expected any moment to be my last.

It was therefore with surprise that I at length heard some one shout out the command, "Descend!" and felt the ship gliding calmly earthward.

The next moment, a severe thud signified our contact with the ground, and an instant later a violent jerk indicated that we had come to a halt. "This way out!" a small-head yelled, almost immediately; and, without any effort on my own part, I was pushed and shoved along the deck, down the stairs, and through the narrow gateway.

But if I expected to be executed immediately, I was once more to be disappointed. Surely, this place where we had descended could not be an execution chamber! None of the implements of torture and death were visible; there was neither gallows, nor guillotine, nor firing squad, nor any of that grim solemnity which usually surrounds legal murder. We had alighted in a grassy, open space flanked on one side by lines of three-story wooden structures, and bounded in all other directions by endless rows of green herbs and shrubs. The regularity with which they had been planted, and the long even irrigation furrows that interspersed them at regular intervals, permitted but one interpretation—and, remembering my early days on a California ranch, I felt as one who unexpectedly meets an old friend in a foreign land.

But why had we been brought to so unwarlike a place? Was it regarded as merciful to let us die in the presence of growing things?

The answer, fortunately, was not long withheld. As soon as my companions had all forced their way out of the airship and stood in a confused mob in the open, rows of A-urian soldiers marched in iron formation out

of the wooden buildings and ranged themselves before us, while one of the A-urian small-heads gravely stepped forth to speak. Or, to be more precise, he stepped forth to read; in his hands he held a small printed document, upon which his eyes were glued while his deep voice rang forth thunderously.

"Prisoners," he shouted at us, "you are now in an A-urian military slave-camp. While not the largest of the slave-camps, it is large indeed, as befits a nation of A-uria's prowess: it is more than five hundred thousand acres in extent. As in all similar establishments, the labors of the captives are employed in the interest of agriculture. You will accordingly be assigned to barracks and given work in the fields and forests. So long as you are obedient and do not attempt to revolt, you will be treated with all the consideration prescribed by the rules of International War. I need only remind you, however, that our camp is surrounded by well-guarded stone walls one hundred feet high, and that death is the penalty of an attempt to escape."

The speaker glanced up from his paper and stood re-



Seen the swarms of ants had mingled with the companies of small-heads. Abandoning their soldierly regularity of formation, the foremost insects were fighting as individuals. Each attached himself savagely to some man's ankle, leg or thigh, where it held on tenaciously.

garding us in silence, as if to weigh the effects of his words. Surely, he could not have known how my heart beat and hammered during that prief pause! Could it be true that we were not to be executed after all?

"You will remain where you are," continued the small-head, "until our sergeants pass among you and assign you each to your post."

Once more he halted; then, by way of after-thought, added, "Is there any question that any of you want to ask?"

There was another pause; each man peered dubiously at his neighbor; no one seemed to have anything to say.

"Very well," said the small-head, evidently expecting no response; and he was about to turn away when, somewhat to my own surprise, I heard my voice lifted in loud inquiry. And abruptly and tactlessly I gave expression to the doubts that had been perplexing me.

"Then do not the A-urians execute their prisoners?" I demanded. "We were told that they shot, or hanged, or electrocuted—"

Loud, rattling laughter cut me short. And in sentences broken by merriment, the small-head replied, "That sounds just like—sounds just like a Panamican story. They think—the Panamicans do—that we're all barbarians. And so they make up lies about our atrocities. We really are a humane people. We do not—" here there came another peal of laughter—"we do not execute prisoners unless they disobey us. They have too much economic value."

Turning to his men, the officer hissed out some order, in response to which they ranged themselves with bristling armor on all sides of us, while scores of the laboring small-heads appeared from the barracks and began to pass industriously among us with notebooks and pens.

## CHAPTER XVIII

### The Conflict Waxes Hotter

NOW began a strange, new phase of my career. In common with countless thousands of small-heads, I was assigned to the duties of a farm-hand. I was lodged, with hundreds of my co-workers, in a long, barrack-like hall in one of the wooden buildings; I was fed twice daily with clock-like regularity; I was compelled to labor in the fields from sunrise to sunset nineteen days out of every twenty, but on the twentieth was allowed a holiday. My particular duties were connected with the sowing and raising of common vegetables, such as beets, potatoes and cabbages; and these I was expected to tend with unrelaxing energy—three days' involuntary fasting was the penalty for crop failure. Yet my labors, though arduous, were by no means distasteful; it was with something like joy that I cultivated these and other plebeian and friendly plants; and it was pleasing to know that these vegetables, though of new varieties and larger than those I had known, had survived from the twentieth century, though all other familiar things had vanished.

Before I had been at my work for a week, I realized how beneficial the change had been. In all ways but one, I was better off than I was among the Panamicans; for food I received, not capsules and water, but fresh vegetables; I worked in the open air instead of in the electric glare of the Insect Basements; I had overseers who, while mechanically severe, were by no means so disagreeable as Sassun and the Section Commander were. Yes, in all ways but one I was better off as a prisoner of war; but the single disadvantage more than offset all the advantages. While I was in the Insect Basements I had had Luella, and while I was in the Training Camp I could write to her; but here I had only her memory.

The times when I missed her most were during my occasional holidays. For then, having permission to do what I would and to walk whither I desired within the limits of the prison camp, I had time for reflection and for brooding, and consequently for loneliness. Even so, however, I did not waste those few precious hours in vain despondency; though I was sometimes sad and moody, I took pleasure in wandering for miles along the vast level reaches of cultivated land, and in learning what I could regarding my surroundings.

Our camp, I thus discovered, abounded in plants both known to me and unknown; in grains and herbs, in vines and thistles and berries, in fruit trees and nut trees and flowery expanses where great bees buzzed and flitted. But most remarkable, to my mind, were the forest areas, where tall trees grew in long even rows. I observed that the trees in each section were invariably of the same height, and that there were patches of trees of all sizes, from the merest saplings to hundred-foot giants; and one day, when I saw how the larger trees were being hewed down and carted away, I made inquiry of a large-head who inspected the work, and thereby solved some mysteries that had been puzzling me.

"Ever since the disappearance of the last natural forests on the continent," he informed me, in the affable manner of one who delights to be of service, "we have had to raise our forests artificially, and to plant and harvest our wood like any other crop. Having no such inexhaustible iron mines as Panamica, we have not been able to resort to any wood-substitute in erecting dwellings and making furniture; hence many of our buildings, unlike those of Panamica, are still wooden, and wood is one of our most important military resources."

"That is not the only way in which you A-urians seem to be different from the Panamicans," I made bold to suggest. "Another thing that strikes me is that you do not eat capsules and water—"

"No, we tried that experiment way back in the hundred and fifteenth century!" laughed the large-head. "There has always been some question as to whether it succeeded—but statistics show that its introduction was followed by a twenty-two per cent increase in the death rate. There was also the return of some primitive maladies, and in particular one which, I believe, was known to the ancients under the name of cancer, or cancer, or something of the sort. Capsule manufacturers, of course, maintained that this merely proved that their product was used insufficiently; and it was only after a twenty-year fight, during which high government officials were involved in the notorious Capsule Fraud Conspiracy, that capsule prohibition was finally established by law. To be sure, the law has been violated from time to time, and there have been rumors of corruption among the enforcement agents; but the nation as a whole, having remedied its former toothless condition by means of irremovable dental plates, has returned to the grain-and-vegetable diet established by the Beefsteak Abolition Act of the eighty-fifth century."

I THANKED my informant, and was about to withdraw when it occurred to me to put a final question.

"Since you are so unlike the Panamicans in these respects," said I, "how is it that you resemble them in the most important thing of all? How is it that you speak the same language?"

The large-head stared at me as if he and I did not speak the same language. "I do not know what you mean," he confessed, his great, broad brow wrinkled into a frown. "How can we help speaking the same language?"

And then while I stood gaping at so ridiculous a response, he flung a second challenge, "What other language is there to speak?"

"Why, I thought—" I began to plead, lamely.

"It's quite apparent," he flared back, "that you couldn't have thought at all! It's also apparent that the Panamicans have kept you in criminal ignorance! Yes, I know they teach you that we A-urians are barbarians; but I didn't think they actually made out that we speak a different language. Ha! Ha! That's a splendid one! I'll have to tell my colleagues!"

And the large-head laughed as though at some outrageous joke.

But, speedily regaining his composure, he turned to me with a grave, remonstrative light in his watery little eyes. "What age do you suppose we're living in, young man?" he demanded. "Do you imagine we're way back in the fortieth or fiftieth century? Thank heaven, we've outlived the Dark Ages! For thousands of years, there's been only one language spoken in the world. That's why the nations are able to understand one another so well."

Thereat, with the aid of a small-head who stood attentively by, my informant arose and went tottering slowly away, evidently unwilling to waste further speech on one so unenlightened as I was.

In the course of succeeding weeks, I learned other and still more interesting facts regarding the A-urians. I found that their small-heads were not quite so small-headed as those of Panamica, nor their large-heads quite so large-headed, nor their wolf-faces quite so lupine of aspect; I also discovered that the large-heads were relatively more numerous, and the small-heads less automatic in their actions, while their lives were not led in the same wild orgy of haste as I had observed in Panamica, nor was the ideal of the ant-hill held in such general esteem.

Of course, they too were insect-breeders, and produced all varieties of monstrous bugs and vermin for use in warfare. But there were some who held, without danger of persecution, that giant insects were no more than a necessary evil; and though this was the unpopular point of view, still the fact that it could exist at all was a point of distinction between the A-urians and the Panamicans. I was surprised to note that, despite all the tales I had heard of A-urian barbarity, my captors appeared to be less barbarous than their detractors.

As time went by, my national sympathies began to alter. From being a loyal participant of Panamica, I came to favor the cause of her foes. Under the influence of A-urian teachings, I grew to loathe the side I once had been forced to support; I grew to wish, as ardently as though I had been a native-born A-urian, that the presumptuous empire across the sea might be crushed. So strong was this desire that, had there been any way of convincing my captors of my sincerity, I should certainly have enlisted in their army.

**M**Y resentment against Panamica was particularly keen because of my opportunities to observe her methods of fighting. It is true that I had been told something of those methods while I was in the Insect Basements; it is also true that I vaguely surmised that the A-urian methods were not dissimilar; but I was most influenced by that which directly touched my own life; and the visible effects of warfare were vastly more impressive to me than those still greater effects of which I was merely informed.

In one sense, I was now a warrior in the front line of battle. For the fields wherein I toiled were a focus of the enemy's attack; and I had not been many weeks

in the prison camp before I learned how bitter, how remorseless, how devastating the attack could be. Now, as never before, I could understand the meaning of the Insect Basements and of the Panamican efforts to produce six-legged destroyers; now, as never before, I was aware why we insect keepers had been compelled to give ourselves to the production of creatures so mean as cockroaches, gray moths and worms. For now I was introduced anew to the very insects I had helped to rear—or, at least, to the sisters and cousins of those insects.

Here, for example, was my old friend the potato bug. And how ravenous he could be when some enemy airship, swooping low at night, dropped him along with all his family into one of our potato patches! We might try our best to exterminate him with traps, poison, steel spikes and asphyxiating gas; but a three-inch insect is no unworthy adversary, and before we had cleared any field of his presence he was likely to have cleared that field of its potato vines. And yet he was only one of a horde of invaders! Equally destructive was the giant slug which the enemy deposited among our cabbages; and a new variety of weevil, evidently of their own development, which played havoc with our carrots, turnips and beets; and a form of rust that left our wheat fields in ruins; and a huge caterpillar which conquered our pear and apple orchards despite everything tons of spray could do; and a leaf-cutting ant that stripped the foliage from the best of our forest trees; and a recently cultivated species of bacteria, which was spread by the legs of a small beetle, and was capable of withling all the leaves in our peach, plum and apricot orchards.

It was not long before I discovered that my duties in fighting insects far exceeded all my other duties combined. Merely to keep their numbers within endurable limits was a gigantic task; despite all that we could do, some varieties multiplied until the ground swarmed with them and they could be slain only by a spray of burning oil. And, despite all that we could do, they destroyed one rich patch after another of cultivated land. Only rarely could we produce any unspoiled fruit or bring any grain or vegetable to maturity; during my first year on the farm, the production of a bushel of uninfected grapes or wholesome corn was considered a cause for rejoicing. It was estimated that the actual yield was less than ten per cent of the normal!

Of the sufferings of the city dwellers under the diminished food supply I caught occasional rumors. I was told that the government had cut down the prescribed civilian rations by one-third, so that millions lived in a state of chronic malnutrition and children and invalids were perishing like flies. Had it not been for the countless storehouses filled long before with reserve supplies, famine would already have seized us all; even as it was, the menace was so acute that alarmists were advocating a return to a capsule diet.

**A**FTER we had expended millions of gallons of asphyxiating gas and poison to exterminate the insects, it was discovered that the dead vermin constituted almost as much of a nuisance as the living, for we had not sufficient facilities for removing the corpses, and the putrefying bodies were a source of noisome odors and deadly diseases. Some new method of attack was obviously necessary; and the A-urians, always ingenious, hit upon a scheme that seemed to solve the problem. Why not capture the insects alive, and return them to their distributors? No sooner suggested than done! . . . thenceforth we were forbidden to slay any insects, but, armed with long wire nets

and cages, were to make captives of as many as we could. This order we carried out with a vengeance, though it was not always easy to snare a crawling caterpillar or a leaping grasshopper in a net; but so many insects were secured that five thousand airships, laden to the brim with a wriggling, squirming cargo, would set out daily from our camp alone. When it is remembered that these insects were all to be distributed on Panamanian territory, and that they were mere auxiliaries to those reared in our own Insect Basements, it will be understood that A-uria was not the only nation afflicted with a verminous pest.

But it was not long before we began to realize that the success of our new scheme was dubious. Shortly after its adoption, we noticed a disquieting increase in the insects distributed by the Panamanians. And spies informed us that the foe, imitating our own methods, were securing the insects we scattered among them and returning them alive to us. Our reply, needless to state, was to gather them up again and restore them to the enemy; in response to which the enemy, not to be outdone in courtesy, captured them anew and conferred them once more upon us; and so the interchange proceeded, back and forth, back and forth, back and forth, until it was estimated that in some cases we came into possession of the same insects no less than seven or eight times!

But meanwhile, in the course of their extensive travels, the insects had not lost sight of their prime purpose in being. They did not forget to multiply, and then to multiply again, and then to multiply once more, and to multiply on both continents alike; and generation followed generation, or rather successive generations came to co-exist, with a regularity that was as much our despair as it was the hope of the foe. It was computed that never before had there been so many insects on earth; even amid the censored seclusion of the prison camp, we were obsessed by rumors that the vermin had escaped beyond control, had spread like a pestilence across the continents, and were making leafless wildernesses of whole provinces.

But all such reports, since they dealt with things beyond our knowledge, left us relatively unaffected. When, on the other hand, we learned of the so-called Scarlet Death, which swept the A-urian continent during the second year of the war, we could understand and sympathize fully, for were we not ourselves in the center of the disaster? How the pestilence arose was at first a matter of dispute, for the symptoms were unique and the malady previously unknown; and it was only after months of investigation that A-urian scientists traced the source to a bacillus that entered the human system through the bite of a species of Panamanian flea. Since there was only one kind of flea that played host to the bacillus, and since that flea had been introduced into A-uria by the billions since the outbreak of war, there could be no further doubt that the epidemic had been deliberately produced by Panama.

It was little consolation to point out, in reply, that the disease had acted like a boomerang; that the bacteria, well scattered by the omnipresent insect, had spread in no time at all to Panama, had taken as many lives there as in A-uria, and had dealt death to the very planners of the contagion. In this it had but followed the course of all bacterial weapons during the past ten thousand years; and the afflicted could scarcely profit from knowing that, by an ironic justice, their foes were smitten as severely as they.

THE earliest manifestation of the disease, and the one from which it took its name, was a scarlet

patch that appeared on the cheek of the victim and spread until it had covered the entire face. Almost simultaneously, or at most but a few hours later, the temperature would abruptly rise, the heart would commence to palpitate violently, and the sufferer would clutch at his throat with the sensation of strangling. Sharp pains would shoot through the chest, there would be a sense of nausea, and a foaming at the mouth, accompanied by indescribable suffering; this would endure sometimes for minutes and sometimes for hours, and in most cases the paroxysms would subside only to give place to that coma which precedes death.

Of the persons afflicted—and this included two-thirds of the population—considerably more than half would succumb; while a majority of those that recovered were left in a paralyzed or permanently weakened condition. No remedy was yet known, though scientists by the thousands were laboring to discover a cure; no anti-toxin had been perfected, and there was no means of prevention other than through the extermination of the insect carrier; while the uncontrollable multiplication of the flea, just at the time when its limitation appeared most necessary, gave little hope for forestalling future epidemics.

In our camp, as in all other parts of the land, the disease struck as suddenly and irresistibly as a cyclone. While I was among those fortunate enough to escape, I had the sorrow of seeing my companions smitten down on all sides; daily the long rows of covered stretchers, borne in slow melancholy lines from our barracks, gave proof of the toll that the pestilence was taking. And daily the funeral pyres burnt more fiercely, and the funeral drums beat more lugubriously; while each man, as he watched the cheeks of his fellows turn scarlet with the death symptoms, prayed a silent prayer and raised vain hands to demand of heaven whether he would be the next to go.

During all those horrible days, when I lived as in a nightmare and the cries and odors of death grew as familiar to me as the sound of my own voice, my thoughts hovered constantly about a single object—an object removed by untold and impassable leagues. In fancy I fled across the ocean to another continent; and there I wistfully surveyed a well known lovely face capped by dark hair and animated by two deep blue eyes. Had she been spared, she the most precious of all living creatures, while the devouring plague was slaying its millions and sweeping across the earth?

## CHAPTER XIX

### The Coming of the Destroyers

IT might be thought that one universal calamity such as the Scarlet Death would have sufficed to end the war. As it happened however, it tended only to prolong the contest. By destroying hundreds of millions of food consumers, it removed the menace of starvation and gave a new lease of life to all countries. Since all retained the same relative numbers of combatants, all were as able as ever to continue fighting; and since propagandists on both sides convincingly blamed the foe, the epidemic only served to lend fuel to the general animosity. Besides, as patriots on both sides never tired of insisting, the disease in no way affected the fundamental issue; as much was at stake as ever, and loyal citizens must still rally stanchly to the defense of their weather.

And so the Scarlet Death proved to be but an incident in a war of many events. Alas! it was to be wholly overshadowed by developments that no man yet could foresee; and things stranger and more

ghastly and unprecedented were to follow. When, after about six months, the contagion had run its course, affairs gradually returned to the old familiar channels; Panama scornfully rejected a peace offer that A-urian diplomats had attempted to negotiate; activities on all fronts, which had temporarily subsided, were renewed with all the zeal possible in view of the diminished numbers of combatants; the interchange of insects was resumed with mutual vigor, regiments of half-grown youths and even of children were put into training with a view to the future, and once more all began to look forward to a war lasting for years.

This forecast of the war's duration, unfortunately, was not excessive. Optimistically, I had anticipated that in a few months, a year at the most, hostilities would be over; but the year dragged by, and then two years, and then three, and still peace seemed no nearer. If the great pestilence had not shortened the conflict, could one expect the war-makers to be affected by the knowledge of lesser events?—by the thought that scores of cities had been battered out of existence, and scores of armies annihilated; that the inhabitants of wide areas had been poisoned or asphyxiated, and the population of whole towns literally eaten alive by giant ants or stinging flies; that the insects were swarming unchecked throughout the world, and had already laid waste an area estimated at millions of square miles? Let no one imagine that considerations so slight would have any weight with the leaders of the nations; destruction but whetted their appetites and they gloated like vultures on the carcass of calamity; and having pledged themselves to win in the gamble of rapine and death, they did not hesitate to hazard their countrymen's last drop of blood.

But not even they could have foreseen the sequel. Not even they, unless they had prophetic power, could have anticipated the unparalleled catastrophe that loomed ahead. Yet that catastrophe was but the logical fruit of their activities, and had they had the wisdom to understand what was to come from the seed they were planting, they would have had the foresight to expect the eventual crop. There must, however, have been some flaw in their reckoning, some fateful gap before which they paused bewildered and blinded; otherwise, they would surely have halted before it was time to cry, "Too late!"

It was during the fifth year of the war that the destroyers appeared. There had, of course, been hints and rumors of them before; but not until the fifth year did they arrive in such numbers and wreak such havoc as to be really alarming. As at some silent, universal signal, they sprang up simultaneously in all lands, a fact which proved that they had been secretly distributed in all lands; and, while they did not even then cause widespread apprehension, they were not long in developing into the greatest horror and the foremost enemy that the human race had ever encountered.

Instead of dwelling upon the general aspects of the disaster, let me begin with an account of my own experiences. I was still working in the prison camp when the destroyers appeared; still working, though years had gone by, at the same old task of cultivating grains and vegetables. With each passing season, I had found my labors growing more difficult, for the insects had become more numerous and harder to cope with; none the less, I had not wholly failed, for I had become skillful in capturing giant bugs, and had learned how to cover my plants with wire screens and nettings so as to exclude most of the pests and to insure

almost a normal crop. I will not speak of the pangs I experienced during those years, of the irksomeness and monotony of my work, of my moodiness and loneliness and of my longing for Luella, or of my hopes for the termination of a war that seemed interminable. All this, while it has a strong personal interest, has no bearing upon the events that were convulsing the world; accordingly, I must turn from it to the more vivid and violent phases of my experience.

MY first foreboding of disaster arose from rumors which from time to time seeped into our camp despite all the precautions of censorship. Some strange new insect, it was said, was springing up in all parts of the land, destroying vegetation and rearing cement towers hundreds of feet high; and no method to suppress it had yet been discovered. Though I knew that the reports must be exaggerated and that the towers were more likely only tens of feet high, I recognized at once that there must be some basis for the story. Did not the description accurately fit the termites, or white ants? And was it not time that these insects, distributed by the millions several years before, should be manifesting themselves? The more I reflected upon it, the more plausible the explanation appeared; and the more I meditated upon the ways of the termite, the more certain I became that trouble was brewing.

I could not, however, surmise the full extent of the trouble. Even when the danger stared me in the face and the invasion of our camp commenced, I did not perceive the seriousness of the menace. The first encroachments of the insect were apparently feeble enough; they were signified merely by the appearance of little muddy brown eminences projecting a foot or more above ground. The erection of these edifices was witnessed by no man, and probably occurred at night; nor did any man discover in what way they grew, though it was certain that they did grow each day by inches. Yet, while they originated thus in mushroom fashion, their texture had nothing of a mushroom quality; our stoutest steel axes were splintered against them; and, lacking dynamite, we were forced to leave them unharmed.

Therein we made a great mistake. At all costs, we should have secured some high-powered explosive—though subsequent events showed that even this would not have saved us. Unwittingly, we had allowed the enemy to entrench himself on our territory; and we had yet to realize that here was a foe that would not retreat. In the beginning, as befitted a military strategist, he did not show himself in his true colors, and his depredations were so slight and so well concealed that we hardly thought it worth our while to exterminate him; and later, when we discovered the wolf beneath the sheep's clothing, we found that we had no weapons against the hidden fangs. It was not until the termite dwellings were eight or ten feet high that we began to feel seriously concerned; and by this time a sharp governmental warning, flashed to every hamlet, prison camp and farm in the land, showed that we were not alone in our anxiety.

"Destroy the termites!" ran the message. "If need be, spare the other insects, but *destroy the termites!* Devote your best energies to them! Leave not one alive! Asphyxiating gas will be supplied to all applicants. Tons of super-explosive are being manufactured for distribution wherever termitariums appear. Death to the termites! Death to the termites!"

"Death to the termites!"—this, in coming days, was to be our slogan, our motto. And yet, when we first heard that meaningful phrase, we could not appreciate

its importance. We had been warned, to be sure, that the insects were destructive, and even dangerous. But we did not know how destructive, and how dangerous they were. But we were shortly to be enlightened.

One of the first manifestations of termite activity occurred in a field of wheat which lay ripe and ready for the reaper. Over night the entire crop vanished; not only the grain but the stalks themselves disappeared; neither a husk nor a scrap of stubble was left on the shorn earth. And yet not one of the marauders was visible. At first we did not even know who the marauders were. Various theories were propounded, but to no avail; several innocent insects were accused, and the charges dismissed; then some one pointed out that, since the field had been covered with wire netting, the thieves must have come from underground. Ants and other burrowing creatures were not to be suspected, since they had never been known to work with such thoroughness: circumstantial evidence pointed clearly to the termite.

THE next exploit of the enemy was still more tantalizing. Several hundred bushels of corn, recently harvested, had been left standing overnight in the fields in sacks of woven wire, which we naturally thought would save them from insect attack. But we had reckoned without the termite. When we resumed work in the morning, we found the sacks, but not the corn! And little round holes, perforating the metal near its base, proved where the robbers had entered! At first we were dumbfounded, and suspected that some Panamanian spy had punctured the bags; but several large-heads, inspecting the ruins, assured us that the event was in no way remarkable, that termites even of the smaller species had been known to penetrate tin cans by means of an acid that corroded the metal, and that the giant modern variety would probably be able to make its way through armor plate.

And if the shrewd insect was able thus to prevail over steel, its activities, wherever wood was concerned, were little short of uncanny. Since its diet consisted of the cellulose or basic fiber of plants, wood was one of the chief delicacies on its bill of fare; it had no hesitation in consuming the substance whenever it might be found, and in consuming it in wholesale quantities. And here again it manifested a diabolical intelligence. It did not come out into the open in a gross and obvious way; it stormed all our citadels by silent assault, and with admirable tact and strategy; and the battle was usually over before one knew that it had commenced. Only after the assailant had quietly withdrawn, would one learn of the attack from the wreckage that was left; but such was the finesse of the insect, and such its love of "camouflage," that even the wreckage would not be apparent at a glance. Invariably it worked from the inside out, devouring the heart of things while leaving the surface intact; and thus it would win successes and play pranks that the devil himself might have envied.

For example, one would sit down upon what one fancied to be one's chair, only to crash in ruins to the floor and learn that most of the wood had been eaten away, only enough remaining to permit the object to stand apparently unaltered on four legs. Or, resting the hand upon the doorpost of a cottage, one would find walls and roof alike collapsing like cardboard and showering upon one's head in a torrent of paper-thin fragments. Or, during a stroll, one might lean against some giant of the forest, to see it topple over like a toy castle, and catch glimpses of a trunk scraped hollow almost to the bark. And such occurrences were not exceptional; they happened every day! The strange fact, the sinister and disquieting fact about it all, was,

that the marauders were rarely visible; they came and went stealthily as ghosts, committing their foul deeds like assassins in the dark; they never ventured into the sunlight, they traveled either underground or through covered passageways of their own construction; yet they seemed able to penetrate anywhere, to capture anything, and to retreat with their booty before ever the first alarm had sounded.

All our efforts against them appeared futile and blundering. Even dynamite, our chief hope and weapon, was at best but a temporary expedient. I well remember how we would blast some of their dwellings to bits, and how, after the discharge the agitated workers would dash wildly in all directions, rescuing what they could and then retreating underground, leaving the ruins to the protection of soldiers with huge armored heads and crab-like mandibles. One would have thought that a few blasts would terminate their career—how could the soft-bodied blind workers, though three or four inches in length, withstand the aggression of man? How could even the grotesque warriors be of avail? Yet they did withstand the aggression of man! Perhaps the secret was in their organization, which had a perfection surpassing that of a machine. Absolute orders seemed to issue from some unknown authority, and those orders were obeyed with the submissive willingness of a trained army. It was interesting and disquieting to hear the rasping sounds by which the insects evidently communicated with one another; it was more than interesting to observe how, after a dynamite assault, living lines of soldiers would band together so thickly, that one could cut them only with a sword, and would guard the torn galleries of the hive, while filling the air with an acid that seared the hands and tortured the lungs. Despite my loathing of the creatures, I greatly admired their cooperation, and in particular the manner in which the required number of individuals seemed always to be marshalled at the required place and time.

One may say that their actions were purely automatic and instinctive, but I have never heard of any theory of instinct which would explain all that I saw. If, for example, they behaved mechanically, why did they not attempt to rebuild their towers once we had blown them away? Why was it that, after a dynamite assault, they would build exclusively *beneath ground*? Here was a change that implied the abandonment of the habits of millions of generations; yet that change was made apparently without hesitation and at a moment's notice, and was executed with not less resourcefulness than harassed human beings will display in a crisis. Having blasted away the last of the termitariums, we found that we had merely limited the visible activities of our foes; they continued to be with us as much as ever, but had dug far down into the soil and had excavated their dwellings where pick and axe could not follow and where dynamite could not molest. To be certain of extirpating them, we should have had to blow away the entire surface of the earth to a depth of dozens of feet.

BUT as yet they had not manifested themselves in their worst aspect. History records many cases of plants and animals which, transplanted to some foreign habitat, have thriven and multiplied and converted themselves into a scourge; but never, I believe, had any creature so thoroughly mastered an alien environment as did these termites. Aided by the inconceivable fecundity of the queen mothers, which produced eggs at an average rate of one a second, the insects flourished and increased enormously; and all our efforts against them were like a puff of wind against a forest fire. Few could at first read the doom

written in the mazy tunnels of the invader; but, during the sixth year of the war, it began to be apparent that the world was not big enough to hold both the termites and man.

For they were demonstrating anew the principle, first proclaimed more than ten thousand years ago, that population tends to encroach on the means of subsistence: having devoured all available grain, straw and stubble, in addition to most of the trees of the forest and the best of our barracks, they departed from the custom of their kind by consuming all green life indiscriminately. And in this they displayed their usual thoroughness; field after field was stripped clean of bush and shrub, of herb and grass and flower, not a single stalk nor a rootlet being left. Almost always they conducted their raids at night, so making it impossible to anticipate or forestall them. And so widespread were their depredations that, within a few months, our entire camp could produce not a single fruit or berry, nor head of cabbage, nor grain of wheat. And the fields once green and flourishing were now sterile gray wastes.

Meanwhile, with rations cut down one half, we were suffering severe privations. And the reports pouring into our camp showed that we were not alone in our plight. All over the world, it was said, the termite plague had spread; from ocean to ocean and from equator to polar circle, the white ants were rearing their teeming colonies and stripping the earth clean of all green things. Before their advance, the other insects had to pause discomfited, starved out of existence or driven out of their native habitats; the invaders spared no land, unless it were already a desert. Even Panamania, originator of the plague, was suffering bitterly beneath the jaws of the despoilers. Already starvation laid its bony hand across all the nations; not even a capsule diet was available, since certain essential ingredients of capsules were being destroyed; millions, though how many millions we could not know, were perishing from want and hunger; and the devastation begun by the Scarlet Death seemed likely to be completed by the termite.

By the beginning of the seventh year of the war, even the professional militarists were coming to recognize that a greater cause than the national weather was at stake. Then it was that, at the instigation of the "Panamanian Financial Democrat," representatives of the three warring nations met at the so-called Termite Conference to consider possible terms of peace.

## CHAPTER XX

### The Dealing of the Death-Blow

WHILE the diplomats of Panamania, A-uria and Afalia were assembling in solemn conclave to weigh the difficulties of the world and haggle for territorial advantage, the war against the white ant was proceeding with uninterrupted fury. And, at every turn and corner of the vast battlefield, mankind was losing in the conflict. Trench after trench and redoubt after redoubt was being taken; it was not long before we were driven to our last line of retreat. This meant that, in one sense at least, we were forced to imitate the tactics of the insects: being no longer able to secure our sustenance from the earth, we were compelled to burrow underground; and thenceforth my fellows and I led a subterranean existence.

Long before the outbreak of war, a series of interlinking galleries and chambers had been excavated beneath our camp at the depth of a hundred feet; and similar labyrinths were to be found in many parts of

the land. Their purpose had been to provide store-houses for food, and at the same time to establish places of refuge where the people might retreat in case of a poison gas assault. But though intended only for use against human foes, they proved invaluable against the termite. At least they were invaluable as a last, desperate stronghold, for we could at best only postpone the catastrophe.

We utilized these corridors, in short, to produce the food that we could no longer raise beneath the sunlight. Mushrooms, reared on decaying wood that had somehow escaped the termites, were our principal crop; but we also availed ourselves of an invention, dating from two thousand years before, which enabled us to cultivate a limited quantity of grains and green vegetables under ground. This contrivance, known as the Radium Arc Light, was so costly that hitherto it had been regarded only as an interesting scientific toy; but now it proved indispensable, since its rays had a life-giving property similar to that of sunlight, and would encourage plants to a stunted, but none the less real, growth. With its assistance, we succeeded in raising potatoes the size of marbles, and turnips the size of radishes, and grains of wheat the size of rice; yet, though these diminutive products could be secured only at the cost of the most painstaking care, the trouble seemed worth our while, for it put off the eventful day of reckoning.

For months I labored in those vegetable corridors, rarely having leisure to see the light of the sun. And how assiduously and how devotedly I applied myself to producing the badly needed crop! How carefully I sowed the dank soil, how zealously I guarded the young growing plants, how attentively I regulated the Radium Lights so as to provide neither too much illumination nor too little! Alas! not all my efforts were to be rewarded; we harvested one crop, indeed, and congratulated ourselves that we had found a way to elude the aggressor; but before we had enjoyed the fruits of the second planting, our underground haven proved to be the refuge of a moment.

Was there any place on the earth or beneath it sacred from the ravages of our sly gnawing adversary? Such was the question that many a dismayed tongue asked one morning, as we surveyed the ruins of what had been a sack of wheat. Every particle of the grain had vanished; the sack itself, except for a few scattered fibres, had been totally eaten away; as usual, however, the marauder had come and gone unnoticed, and no trace of him was to be seen. Yet there was no doubt about the identity of the miscreant. Nor could we question the probability that the visit would be repeated. Already, with a burst of despairing foresight, I suspected that which I was shortly to learn certainly: the cement walls of the tunnels would be no protection at all; the plunderer had ways of boring through them or around them—our crops underground would henceforth be no safer than those above ground.

AT about the time that my forebodings were being confirmed, the deliberations at the Termite Conference were reaching an advanced stage. There had already been much talk about indemnities and reparations; the question of war guilt had been judiciously weighed and considered, the conclusion of both sides being that the enemy had been responsible; moreover, there had been long debates regarding the Twenty-Four Points of Peace propounded by A-uria, and the Forty-Eight Points of Peace insisted upon by Afalia, and the Sixty-Seven Points of Peace without which, as the Panamanian representatives phrased it, "the golden fruits of the conflict would be lost." On all these issues there had been addresses of unusual eloquence;

and the total, printed in one hundred and fourteen octavo volumes, was said to constitute a monument of political oratory. Yet despite the brilliance of the debates, it seemed impossible for the diplomats to reach any agreement. And after the ninety-fifth day of the sessions, the only visible result was to be observed in the ire of some of the delegates and the impatience of the rest.

IT was even rumored that the conference was in danger of disbanding, and that "War to a finish!" had been on the lips of some of the more impassioned envoys. And possibly the conference would actually have disbanded—had there not been little creeping influences more powerful than the voice of the most powerful speaker. The insect peril, in a word, had been growing even more acute while the diplomatic thunders were shaking the assembly halls: And the duller of the delegates could perceive that all the nations alike were engaged in a battle to the death. To the increasing devastation wrought by the termites, had been added the wholesale ravages of other vermin, which, escaping from control in the early years of the war, were only now demonstrating their true qualities. One might almost have suspected that, by some inscrutable language, the termites had communicated with their fellow insects and enlisted them as allies in the war upon mankind; for just when the white ant was molesting humanity upon all fronts, plundering our food supplies and destroying our dwellings, other and less subtle insects launched a frontal attack and brought terror and death to all the cities of the earth. The most plausible explanation is that, deprived of food by the advance of the termite, the lesser insects had been driven into human habitations as a last recourse; at all events, the fact is that giant ants, mosquitoes, scorpions, spiders and stinging flies had entered every civilized town in numbers that appeared to defy extermination. Most of these creatures, being predatory by nature, seized upon man as a natural victim, and attacked him upon every possible occasion; their ravenous swarms overpowered and devoured infants and invalids, put full-grown men to flight, besieged families in their dwellings, starved thousands of the marooned to death, and made it perilous for any person to venture upon the streets without armor. And despite all that could be done against them, their numbers appeared to be increasing.

Such was the situation that the Termite Conference found itself called upon to face. Even the anodyne of their natural complacency and the soothing-syrup of debate could not deafen the delegates wholly to the cries of outraged and shuddering millions—to the voices of their countrymen calling out in despair that something, almost anything must be done. For months the Panamanian-A-urian conflict had settled down to an affair of desultory skirmishes, since most men had tacitly turned to confront the six-footed foe; yet it was painful to observe how slow the diplomats were to face the reality and to see that all the waning energies of the race must be conserved. My own view is that, at the time the Conference was called, there would still have been a chance to avert the ultimate catastrophe; but that chance, if it existed at all, was frustrated by months of slow deliberation when prompt action was imperative; and when at length the delegates had mastered their conservatism sufficiently to admit that the situation was a radical one, the termites and their kindred had won victories that no human arm was ever to annul.

It was on the two hundred and thirteenth day of the Conference that the Proclamation of Peace, drawn up

months before, was finally approved. The terms of the agreement, in contrast to the arguments that had preceded its acceptance, were simplicity itself: it provided merely that the nations should cease fighting, that there should be no reparations or indemnities, and that all should retain the same territory and weather as at the outbreak of war. So far, so good!—with what energy they could still command, all the nations held celebrations, and all proclaimed that they had won a "moral" victory. But the insects, had they been able to read the document, might have contended that theirs was the victory, both moral and physical; for they were specifically mentioned, and in the concluding part of the instrument occurred this significant provision:

"Henceforth all the nations, with whatever energy they can marshal, will cooperate to crush the menace of the termites and other destructive insects. In this endeavor, neither men nor wealth shall be spared; nor shall our efforts relax until the pest has been exterminated."

Before this article of the agreement could become operative, it had to be ratified by the parliaments of the three nations. But so dire was the peril that all the parliaments convened at once, and disposed of the matter with unprecedented rapidity: not over ninety days more had elapsed before the legislators had signified their approval.

But just then, when prayers of thanksgiving were echoing around the world, another hindrance appeared. The one hundred and one per cent. Panamanian patriots, protesting against entangling alliances, declared that the treaty was unconstitutional; and so there was nothing to do but to refer it to the courts, which were not scheduled to convene until the following winter. Urgent pleas were made to the various justices, to call a special court session and so save vitally needed time; but each of the justices in turn, after solemn consideration, dismissed the motion on the ground of lack of jurisdiction. When finally the courts did meet, and had duly weighed all points in the two five-hundred page briefs, and had found that after all the treaty was quite constitutional, another six months had dragged by.

AND during all that time the termites, undeterred by legal technicalities, had been quietly boring through the soil and rearing their adamantine strongholds; and more than three quarters of the earth's surface had been rendered uninhabitable for man. And their fellow insects, taking possession of human dwellings, had forced the abandonment of half the cities of the world, and were daily laying closer siege to the rest.

But eventually, if somewhat tardily, the celebrated "Anti-Insect Cooperative Agreement" became effective. And eventually, though a refractory few still threatened further legal action, the nations began to undertake concerted and determined measures of repression.

It was my fortune to be one of the innumerable agents of that repression. Even after peace was declared, I had been detained in the prison camp, for the nations, in their preoccupation with judicial technicalities, had as yet neglected to provide for the release of prisoners; and my days, still devoted to the attempt to outwit the termite, had for the most part been wasted. Despite enormous effort, I had been able to produce little or no food; while my rations, reflecting the general famine, had been so reduced that I was continually hungry and had come to wear a lean, cadaverous look. Seeing how my companions would snarl and wrangle over a scrap of bread, and how they had been reduced to burrowing for earthworms and termites and devouring the loathsome creatures, I was far from

happy or contented; and when at length, to allay starvation, I too had come to add a broth of white ants to my daily bill of fare, I was frantic for some change, any change that would free me from the nightmare. Hence I was delighted when, the treaty of cooperation having finally been ratified, I was notified of my assignment to new duties.

"All able-bodied men and women," ran the order flashed around the world by the newly formed International Vermin Commission, "are to be conscripted for service in the war on the insects. Small-heads and large-heads alike shall be enlisted, each according to his capacity; only the wolf-faces, being required as executives, are exempted from front-line duty. . . . Prisoners of war will be employed by their captors; those who can operate airships will be appointed to the aerial division."

In accordance with these instructions, I was put to work by A-urila as one of thousands of air pilots. Together with a small-head who was to accompany me on all flights, I was to scour the land for hundreds of miles in every direction from my base, which was still the camp where I had been held for years; and I was to wage war upon the insects not only with asphyxiating gas but by means of a new poison, known as "Vermite," which was said to bring certain death to every flying and crawling thing. This drug, a volatile liquid recently perfected by the A-urian government chemists, was so deadly that one could handle it only while wearing a gas mask; a single whiff was sufficient to cause paralysis or death. It was hoped that, with its aid, the insect hosts might be checked if not wiped out of existence; and my fellow pilots and I, accordingly, were instructed to force it by means of long sprays into the entrance of every termitarium.

Now began one of the most arduous, dangerous and exciting periods of my life. Each day my companion and I would set out at sunrise upon an assigned course; each day we would be gone until sunset had reddened the west. And in the interval we would have experiences sufficient to rend the heart and mind and to appal the imagination. From all the descriptions which I had heard of the insect incursions, I knew that the disaster was the most frightful in history; yet I had small conception of the actual horror until I had the chance to observe it with my own eyes. Never, in my ghastliest fancy, could I have conjured up visions of those plains, literally alive with insects, where the crawling things struggled and squirmed over one another in a convulsive mass of mandibles, legs and antennae, almost hiding the surface of the earth; never could I have conceived of those towns whose steel towers, pierced by the shells of war, were interspersed with streets that were little more than solid masses of writhing maggots. Much less could I have imagined those other cities wherein, amid the crumbling caricatures of houses, the muddy brown termitariums towered to the height of church spires; nor could I, even in my most gruesome moment, have pictured how bleached human skulls and skeletons would lie sprawled amid the ruins, while over them the great ants would run and play and monstrous spiders rear their twinkling webs.

SOME of the scenes come back to haunt and oppress me even across the years. I see again the ramshackle stone dwellings where had once been a village, and where a few specters of men, pale and emaciated as the very incarnation of famine, had barricaded themselves behind paneled glass doors, around which the destroyers crept and swarmed. And once more I view the mouldy basement whose windows, timidly opened at the sound of our approach, revealed a cada-

verous half-grown lad in the midst of several sprawled forms, that he vainly tried to shield from the vermin. More poignant still, however, were my glimpses of the exiles—the exiles, whose slow, tottering forms trailed along every lane and highway, and whose unburied corpses disfigured every square mile of the landscape. Driven from their homes by invaders, whom they could no longer resist, hundreds of thousands of refugees had gone wandering hither and thither, toward what goal they scarcely knew; and their pitiable companies, ragged and dishevelled, the men with unshorn stubby faces and the women drooping or in tears, were a sight too common to awaken comment. With them they bore all their worldly goods, sacks and boxes in which a last remnant of food was contained, steel cylinders filled with water, a blanket perhaps, wire gauze to ward off the insects, now and then even some child's toy or some poor, forlorn bit of feminine finery. A few of the men walked firm and upright, but more stumbled on with slow, lurching steps, or staggered as though beneath some invisible burden; many of the women, and most of the children, heaved and panted as if each step were to be their last; here and there some six-year-old or eight-year-old, or a woman nursing a weakened babe, would fall down by the roadside; yet their companions would pass on as though they had not noticed. In some of the parties were man-drawn litters laden with large-heads and wolf-faces, who could not do their own walking; but most of these encumbrances were eventually abandoned, leaving the forsaken ones wailing and pleading on some rocky hill or leafless plain, while the small-heads trudged on, each to seek his own salvation in the frantic struggle for survival.

Perhaps, after all, the deserted persons were the more fortunate, for their sufferings were more swiftly over. Their unfaithful servitors, though possibly to taste longer life, were to descend to even profounder misery. Some whom I saw had gone mad, and beat and clutched at the air with nervous, convulsive movements, or, writhing on the ground, snapped at their own hands and arms with savage, tearing teeth; others wailed in a hysteria that was like the mockery of fiends; a few, not yet quite demented, screamed out their despair to comrades that gave no sign of hearing. One or two, lying prone on the earth with sharp blades penetrating their breasts, showed that they had sought their own way out; others had apparently perished of starvation; still others, with torn faces and gashed hands, evidently owed their death to the attacks of the six-footed foes. It would be futile, no less than ghastly, to dwell upon all the sights that tormented me; how men were reduced to feasting upon ants and spiders; how men were reduced to feasting upon men; how the primitive law of "Each for himself" asserted itself, till theft and murder became hourly occurrences and few would hesitate to snatch a glass of water from the hands of a dying man or to wrestle with an infant for a crust. To us who daily flew hundreds of miles and everywhere saw the same sad story repeated, there was but one conclusion possible; mankind was waging a battle for its very existence, and was losing in the contest; we had encountered a foe shrewder than ourselves, and better adapted to survive, though our own hands had lent it the fatal power. Already the death warrant of our race had been signed, and a few weeks more, or a few months at most, would complete the story.

All devices that we could employ were ineffective. Even Vermite, upon which we had relied to check the white ants, proved to be only as useful as a thimbleful of water would be to quench a conflagration. For here

again we were frustrated by something uncannily sagacious in the enemy: the termites, immediately upon the discharge of the poison through the doorway of a hive, would block up all galleries connecting with those getting the drug; and so speedily did they work that the Vermite could never penetrate more than a few feet. Thus, though each attack would cost the lives of hundreds of warriors and a few workers, the prompt and efficient defense rendered the total effect negligible. And reluctantly we had to admit that our last hope was no hope at all, and that we could as easily dam up the ocean with a garden trowel as repel the termites with poison.

Amid the agony and confusion of those dreadful days, when I foresaw the world's end and looked forward to my own impending doom, my thoughts were constantly with one whom I had not seen or heard of for years, yet could not give up wholly. Had Luella survived while war was laying waste the earth? Was it not probable that, unable to endure the strain and the privation, she was among the millions that had

perished? Thusly, in my gloomy moments, did I reason; though hope would always flash up and tell me that surely somewhere she must be alive, somewhere she was waiting for the lover that did not



Over the entire frame, over the long legs, and brawny shoulders and writhing arms, there clung and swarmed hundreds of red-black creatures of the size of mice.... I did not notice whether the aggressors were wasps, beetles or ants; I dashed into mask and armor, seized asphyxiating gas, and rushed to the rescue—

return. And if she did still live, how was I to discover where she was? . . . Above all, how could I contrive to reach her? There was only one scheme that seemed even remotely possible. I must go back to the city of our meeting; for, though she had long since left, it was only there that I might receive news of her.

But for a long while there was no opportunity to return overseas. And then one day, when I had begun to regard the idea as an impossible dream, an unexpected chance appeared to point the way.

## CHAPTER XXI

### A Forlorn Quest

IT is unpleasant to have to admit that my good fortune was rooted in another's misfortune; yet such is the confession that I must reluctantly make. I can console myself, however, by reflecting that I was in no way responsible for the mishap that gave me my freedom; the fault sprang solely from the negligence of the victim. Or possibly it was due to his suicidal tendencies—the truth will never be known. Yet, his was not the easiest way to die. At all events, it is certain that calamity did descend, and that it claimed my one companion: my partner in the daily airplane expeditions.

One day, when we had alighted near the seashore two or three hundred miles west of our base, he bade me remain in the machine, while he went out to pour Vermite into the neighboring termitarium. I noticed, to my surprise, that while he wore his gas mask, he went without armor. But when I remonstrated, he replied sharply that I had better attend to my own affairs. Without another word, he stalked away, trailing a huge can of insect poison.

Telling myself that the ways of small-heads were inscrutable, I began to test and oil the mechanism of our car. I was bending attentively over the steering gear, and had already forgotten my companion, when I was startled by one of the shrillest and most horrifying screams I had ever heard. For an instant I was too astounded to recognize the voice; then, while I stared about me in alarm but beheld nothing at all, the screams were repeated, shriller and more horrifying, but strangely familiar in tone. And from around a little rise in the land there toppled the ruins of a man. Over the entire frame, over the long legs and brawny shoulders and writhing arms, there clung and swarmed hundreds of red-and-black creatures of the size of mice. Was it that the red was the color of the victim's flowing blood? So, at the first ghastly glimpse, I imagined, for the assailants had bitten deep into the flesh at scores of points. Terrified by the howls and groans of the sufferer, I did not notice whether the aggressors were wasps, beetles or ants; I dashed into mask and armor, seized asphyxiating gas, and rushed to the rescue—too late, much too late!

Still groaning and tossing spasmodically, and with body completely hidden by the devouring horde, the victim lay helpless on the ground, like one who had already given up the struggle. It was in vain that I applied the asphyxiating fumes; in vain that I saw the attackers one by one relax their hold and fall down lifeless before me . . . When finally the last of the insects had been beaten off, my companion lay silent and motionless, a flayed and grewsome thing.

Protected by my armor and fumes, I contrived to make a shallow grave and bury him there by the seashore. Then, slowly taking flight back toward camp, I was plunged into a nightmare revelry: in the death of the small-head I seemed to foresee the doom that would shortly befall the last man.

And out of the depths of those melancholy reflections, a great loneliness beset me. Suddenly aware of my solitude in this world that was soon to be the heritage of the insect, I longed with a passionate longing for the sight of a human face and the touch of a human hand. I thought of Luella, and once more the desire to be with her overcame me; and along with desire came revelation, like a great blaze of light, and the understanding that now, as never before, I was free to seek her again.

THEREUPON a daring plan took form in my mind, and I resolved upon something which, though it might mean death, was at the same time the plan. In all my previous flights, I had been restrained by the presence of the small-head; always my companion had held me to the prescribed course and compelled me to heed the directions of our superiors—now, however, what was there to prevent me from going whither I would? What if I did not return to the camp? Would I not merely be reported as missing and forgotten, as scores of others were reported and forgotten every day? And what if, on my own initiative, I flew across the ocean and went searching for news of Luella? The trip would be difficult, but not impossible; the cruising radius of my ship was more than twelve thousand miles; moreover, I was equipped with a compass, and my maps reporting the latitude and longitude of all the world's chief cities. And only yesterday I had been provided with condensed food enough for a month, and with fuel sufficient to carry me around the earth. What excuse, therefore, was there for hesitation?

There was to be no excuse; I did not hesitate; no sooner had the idea come into my mind than I swung the airship about and headed toward the ocean. If, as seemed not unlikely, I met death in those watery expanses, I could scarcely be deemed unfortunate—would that not be better than to die beneath the jaws of the insects? On the other hand, if I did succeed in crossing, and did reach the city where I had worked, entered the Insect Basements, and learned of Luella's whereabouts—But here I reached a point that I dared not pass even in imagination, for mingled with my most sanguine anticipation were possibilities that I had hardly the courage to face.

CONSULTING my maps, I found that my destination (Panamic City 64, as it was officially called) was between three and four thousand miles to the west. At my maximum speed of two hundred and eighteen miles an hour, this distance would take me considerably under a day to cover; accordingly, unless I was deterred by storms or driven into the ocean by motor trouble, I might expect to have news of Luella before twenty-four hours were up! Taking advantage of a device which would automatically hold the car to its course, ringing an alarm in case of danger, I might even expect to snatch a little sleep en route; and so it seemed in no way impracticable, even if somewhat perilous, to be starting out thus at a moment's notice.

Had the gods intervened in my favor, my undertaking could hardly have commenced more propitiously. Not a cloud ruffled the sky as I set off across the Atlantic; scarcely the faintest breeze was blowing; the waters spread beneath me sparkling and undisturbed. For hours I held my course across those never-ending, trackless expanses—expanses unbroken by an island, and unvaried by a sail; the sense of my isolation, my solitude, returned to me with poignant keenness as I stared down at that tossing blue infinity; but on and on I sped, straight on and on into the sunset; and after the red evening streamers had sprung up like unreal

war-flags in the sky and vanished, I kept uninter-  
ruptedly on my gliding, rapid way beneath the ironic  
glitter of the stars.

The first gleam of morning showed me a far-off  
coast-line half hidden by vague ghostly streaks and  
banners of fog. My heart gave a great leap!—Pan-  
amlica once more!—I had safely crossed the ocean!

At full speed I made for the distant shore, and soon  
it was distant no longer; soon I was soaring above  
the gray jutting cliffs and headlands. But what region  
was this? I did not remember ever having seen it  
before; it was totally wild and desolate; bleak sands  
and barren rocks stretched away as far as the eye  
could reach. With a shudder of apprehension, I real-  
ized that I had reckoned the course wrongly, or else  
that the compass had functioned incorrectly—clearly,  
I had lost my way!

It was at greatly reduced speed that I ventured  
across the land. There was not one hopeful sign or  
guidepost; all was boulder-strewn and forbidding, the  
mere ruins of a world. Scarcely an herb sprouted  
among the bare rocks on the sickly soil; there were no  
trees nor roads nor houses, no men, nor any sign of  
men; no living thing flashed through the air or crept  
along the broken ground. At the first glance, one  
might have thought that the land had lain grim and  
untenanted since the beginning of time, a wilderness  
that nature herself had forsaken; but on closer inspec-  
tion one saw how the fields had been plowed and torn  
up, as by some tremendous cataclysm; and one knew  
that desolation had not always reigned here. And if  
one chanced to see, as I saw, how here and there lay  
great masses of twisted and rusted iron, and here and  
there was some crumbling rectangular stone bearing a  
half-obliterated inscription, one would have surmised  
what manner of catastrophe had befallen.

Slowly and sadly I made my flight across those far-  
flung wastes. How return to my course? How find  
my destination? Still there was no landmark to guide  
me; still no promise of the desert's end. Yet, before  
many minutes, I beheld something which completely  
turned the currents of my thoughts. Beneath me,  
where a few fallow weeds struggled for existence in  
what may once have been the bed of a creek, I noticed  
the first moving life. But not, alas! the life of man!  
—was there not some portentous meaning in those  
ugly crawling things, those six-footed things that were  
the sole lords of this world?

Growing more depressed with each passing mo-  
ment, I still kept on my way, and, some time later,  
was startled by a mass of familiar-looking structures.  
But again my heart sank within me; these many-  
pointed towering edifices were not the work of man.  
All too clearly I understood whose work they were!  
And realizing what a foothold the white ant had gained  
upon this continent as well, I felt ready to relinquish  
my last hope for the vanishing supremacy of our race.

I WILL not weary the reader with the details of my  
search for City 64. For the better part of the  
day, I cruised slowly above the forsaken land, reading  
everywhere the same sad story, seeing the dwellings  
of termites but never the habitations of man, observ-  
ing swarms of insects but never a human being—  
though from time to time, it is true, I came across  
scattered and whitened bones which told of the recent  
presence of my kind. I was beginning to fear that  
my own bones would be added to the number before  
ever I saw a living man again; when my eyes were  
attracted to a range of mountains far to the south.  
Spurred on by curiosity rather than by hope, I hast-  
ened toward these eminences; and, as I approached,

they began to take on outlines that were strikingly  
regular and more than vaguely familiar! They were  
not mountains at all! They were the iron towers of a  
city!

To say that my heart beat and fluttered wildly  
would be to understate. I sank down in my seat, feel-  
ing faint and weak, and had scarcely any command of  
my own movements. It was minutes before I had  
recovered; then, still panting with expectancy, I  
glanced once more toward the peaks and turrets of  
the town. Could it be that, after all, I had wandered  
only slightly out of my course? This looked precisely  
like City 64!—in another half hour I should again be  
upon the trail of Luella!

But as I drew near, I became aware of something  
deserted and strangely oppressive in the aspect of the  
city. It seemed somehow like a shell out of which both  
substance and spirit had departed; an ominous silence  
overhung it; there was no sign of life or movement,  
nor even a wisp of smoke; many of the steel towers  
were brown and rusted, and in their sides were black  
tears and gaps. A grewsome suspicion invaded my  
mind, and was repressed with difficulty; fear took  
possession of me, and unreasoning horror urged me to  
turn and flee; I mopped a cold sweat from my brow;  
then, with tense fingers, savagely held the steering  
rod to its course. But as I came slowly to the city  
walls, I was trembling like one who approaches a  
haunted house.

I left my plane for a few minutes.

Still no sign of life; the silence was sepulchral.  
Several little cement structures, just before the en-  
trance to the city, gaped at me deserted and bare, with  
wide-flung doors, as though abandoned many a day  
ago; some three-inch flies lounged lazily upon the walls  
and ceilings. I took one glimpse, and fled; then, rising  
to a height of a hundred feet, I brought my craft to  
rest upon an outlying balcony, stepped out, and peered  
through one of the gaps in the walls.

Nothing at all met my eyes; I might have been  
gazing into the blackness at the ocean floor. Moment  
after moment I stared into the black chasm, held by  
some weird, terrorizing fascination. Then, still trem-  
bling and with a gathering impulse to flee, I detached  
the searchlight of my airship, switched it on, and shot  
into the depths.

Instantly I became aware of a vague commotion  
below, there was a sound of whirling, of rattling, of  
the rustling and murmuring of small forms. And as  
my eyes, adapting themselves to a sharp light, pene-  
trated the abyss, I shuddered anew, and gave an in-  
voluntary cry. Beneath me crawled and swarmed a  
shapeless mass of scurrying, wriggly things!

Scarcely conscious what I did, I leapt back into the  
airship and flashed on the power. And the next in-  
stant, as though pursued by furies, I had gone dash-  
ing once more into air.

Yet no sooner did I feel myself safe in open space  
than my courage began to return. By the time that I  
went speeding by the last of the towers, I had re-  
gained my composure sufficiently for a final clear  
glance at the city.

But I little expected that which I beheld. My eyes,  
scanning the innumerable flawlessly regular spires,  
chanced to fall upon a mass of lettering which was the  
pinnacle of all that pile of masonry. And, turning  
back to read the displaced and toppling characters, I  
received the greatest surprise of all. "City 59," read  
the sign.

IN the excitement of that discovery, I almost lost con-  
trol of the steering gear. It was only by a des-

perate lunge at the guiding lever that I avoided crashing into the steel walls. This was not, after all, the city that I sought! There might still be hope of finding Luella!

By consulting the map, I found that City 64 lay one hundred and fifty miles to the southwest. With the aid of my compass, I should have little difficulty in finding it—though whether there would be any use in finding it was a matter of doubt. Needless to say, I was frantic to end that doubt at once; but night was already coming on; and despite the short distance, and despite my impatience, I was forced to wait until the following day.

Bringing my car to a halt on a deserted ledge of rock, I tried to while away my time and secure what rest I could, while half sitting, half reclining in the pilot's seat. But over my mind there came such distressing visions, such bleak fancies of Luella struggling and entreating in the midst of mountains of insects, that I had little chance either for relaxation or for sleep.

## CHAPTER XXII

### Among the Ruins

THE last red of the dawn had hardly faded from the sky, when I was again under way. I found my goal without difficulty in less than an hour, although the country was bare and unfamiliar-looking: the wide-flung steel towers, looming like mountain ranges, were visible for many miles, and would have guided me even in the absence of the compass. It was with mixed emotions that I approached this city which I had left under such different conditions; it was with hope and longing mingled with a sinking fear—would there be any life left there at all? Or would it be but the life of crawling things? Judging by yesterday's experience, I had cause only to anticipate the worst; yet desire lent force to my belief, and would not permit me to despair before I knew finally that all was lost.

The appearance of City 64, as I drew near, was depressingly like that of its neighbor to the northeast. All things in its vicinity were silent and motionless as a ruin; no sign of living man was to be seen; there were the same great black tears in the towers, and the same obsessing atmosphere of desolation and emptiness. For a moment I had the feeling of one who goes to invade a tomb where abundant life once had been. In this place, if ever, I must find news of her whom I loved.

With greatly slackened speed I covered the last few miles. And the sights that I beheld did not reassure me. Here, for example, were termitariums in a great mass, triumphantly jutting skyward where once had been a level plain; here was a swarm of flying things, with three-inch diaphanous wings and beady eyes, which beat and flapped against the glass of my car as though resenting my intrusion; here, on the ground beneath me, were sights that would have made me shudder had not experience already hardened me—first a man encased in full armor and lying crumpled on the earth, while over him crawled loathsome, obscene things; later, some of the scattered remnants of man, a gas cylinder, a monoxide mask, a torn and blood-stained tunic.

I was almost persuaded that I should see no living person—when out of a doorway at the base of the towers there tottered a being that seemed human and yet scarcely human. His huge frame was armor-clad, and over his tiny head there was a helmet; but with one hand he strove furiously to adjust a mask which

had evidently fallen from his face, while with the other he beat at a swarm of winged things that rasped and buzzed about him. Undeterred by his mad gesticulations, some of them settled on his face; others followed, and in an instant his features had been blurred from view; then, with a heartrending scream, he lunged forward, toppled, and plunged to earth, where he quivered convulsively, and soon lay still.

Shuddering at the sight, I flew close to the smitten one, endeavoring to drive away his oppressors. But nothing that I could do would balk them of their prey; ravenous as carrion-crows, they thronged about their victim until they had plucked him bare of skin and flesh.

But the incident, horrible as it was, had at least brought me one bit of good news. The city could not be wholly in possession of the insects; there was still human life within its walls.

Bringing my machine to a halt near the opening whence the small-head had emerged, I carefully donned my armor and mask, seized a pocket flashlight, stepped from the car, locked it so as to prevent an insect invasion, and hesitatingly and anxiously made my way toward the city.

As I entered, a spider as large as my fist slid just overhead on a half-demolished web, as though, in his role of gateman, he allowed me but begrudging admission.

HOW completely everything within the city had changed! Once inside, I paused in astonishment—could this be the place I had known of old? Where were the myriad cars that had raced in screeching pandemonium beneath the gray looming walls? Where were the vivid lights, the gay colors, the sound of the vehement dash and activity of living multitudes? All was still, all was silent, and a foggy gloom overspread everything, broken only by the glow of one or two sallow arc-lights, which somehow continued miraculously to shine after all their fellows had faded. And by that pale illumination I could make out ominous shapes that crept along the floor, and other ominous shapes that whirled and spiraled through the air, and here and there—like specters in the realm of shades—two-legged mail-clad figures slowly wandering amid the terrifying shadows.

It was the sight of the latter that gave me courage to invade this city of ghosts. Slowly, with the aid of the flashlight, I proceeded down street after street, while at every step I would tread upon some squirming unseen form and behold crawling or buzzing venomous things retreat before me by the score or the swarm. From time to time I came upon some sight that I did not care to inspect too closely—a recumbent shape in armor; a battered airship, with a huddled form on the pilot's seat; the torn vestiges of some human garment, with something alarmingly like a thigh-bone protruding from beneath; a blood-smeared pavement, with a few scattered remnants of human hair, nails and skin.

Why did I continue through those dismal realms? Why did I not dash away in a panic, knowing that no hopeful thing was to be found amid the ruins? I had, I must confess, the impulse to flee, but I bit my lips and kept to my course. Having advanced thus far, how could I retreat?

Still keeping doggedly on my way, I at length reached the corridor that descended to the Insect Basements. With an effort, I flung open the huge unbarred door—instantly a great wind blew by me, and I was struck by a multitude of small missiles that all but bowled me over. Staggering, I leaned against the

wall for support, and still the wind blew by and the torrents of missiles whirled past. A horrible droning and buzzing, which oppressed my ears like the sound of some monstrous motor, made me aware of the nature of the missiles; I realized suddenly what a swarm of hornets and giant flies I had released. At the same time, I became conscious of the wriggling and slimy things that thronged along the floor of the corridor, leaving not one square inch of pavement visible.

To continue was apparently to court certain death. With instinctive revulsion, I shrank back, and in horror started from that loathsome gateway. But, even as I withdrew, I seemed to hear a voice within me that called, "Craven! Craven! Would you give up now that you have reached the last trench?" And another voice, stronger and more imperious still, seemed to command, "Press on! Press on! Risk all, but still press on! Press on, and you will find what you seek!"

It was all irrational; it was disconcerting, terrifying; but I did clearly hear those voices, born possibly of my own desires? born of who knows what unsounded depths of the subconscious? Though aware that I was doing a mad, reckless thing, I could not disregard that eerie mandate, but turned about once more and plunged into the corridor.

Progress now was more than difficult. Flying things beat continually against me, and each time I put down my foot I crushed numbers of crawling creatures. Had it not been for my armor, I would have been eaten alive before advancing twenty paces; even as it was, I was none too sure that I would not end by being devoured. But I tried to force myself on by the thought, fantastic though it seemed, that there might still be human life in the Insect Basements; I told myself that, since there were some small-heads left in the streets above, there would be small-heads below, and these might give me news of Luella. So I reflected—but I had no faith in my own reasoning; the drowning man clutching at a straw has more hope of success than I had, while I fought my way down those long, vermin-haunted galleries.

I had half anticipated that the door from the corridor to the Insect Basements would be closed, as always before; but, to my surprise, it stood ajar, while through the passageway in both directions streamed the six-footed hordes. Truly, the name Insect Basements was deserved now as it never was before! The insects had it completely in their possession, and surged supreme along the aisles that had once been the especial domain of man. I scarcely dared enter those horrible realms; all was almost totally dark there; only a vague mysterious light, far-off amid the labyrinths of columns and cages, lent illumination to those halls once brilliantly blazing.

**T**ERRIFIED, I recoiled once more; it seemed to me that I stood at the gateway to the nether regions. The turbulent buzzing and rasping of the insects, no less than the gloom that enveloped them, was enough to unbalance my mind. But once more I heard within me that unaccountable command, more urgent, more insistent now than ever, "Press on! Press on! Risk all, and you will find what you seek!" Surely, my mind was actually unbalanced!

But despite the dread that made me shake and shudder till my armor rattled, there was something that fascinated me toward that far-off unknown light. What could it mean, the sole illumination in this world of shadows? Surely, there could be no harm in finding out! Choking down my misgivings, I trudged on once more through the darkness, guided

by the rays of the flashlight, before which fled countless scurrying things, like evil spirits that fear to be seen.

I knew well enough where I was going—had I not trodden these very aisles countless times before? Many of the landmarks were recognizable still—but much was changed, how unspeakably changed! The glass cages were all cracked or broken, the steel cages twisted and warped; from the floor of some of the compartments rose tall irregular pointed structures that had not been there before, while from the very aisles, in other places, the termitariums reached to the ceiling. I passed the cottage that had been the office of the Section Commander. The roof had caved in, and a ten-inch spider was perched on a web that barred the doorway; I passed the cages where I had slaved, and in the largest of them all, its glass walls shattered, lay a mass of armor beneath which reposed a crumpled, crimson form shaped like a man.

Again and again fear shot its sharp message to me, "Fly, fly before it is too late!" And again and again that inexplicable answering voice called out, "Press on, press on, and you will find what you seek!" And though sometimes I wavered, and sometimes paused, and once or twice glanced furtively back toward the blackness whence I had emerged, I did press on despite all the promptings of terror. My eyes were still upon the misty far-off illumination, which now was not quite so misty nor quite so far-off. By degrees it was brightening, and from its steady yellowish glow I judged that it issued from an electric orb. Was it but some luminary that chance had preserved while all its fellows were cold and dark? Or did it serve to light some lingering vestige of human life?

As I advanced, a sinister fact became apparent. In some places the roof-supporting columns were bent and sagging; in other quarters the roof itself appeared to be giving way, and bulged downward as though from an earthquake shock. Evidently the insects had eaten away the supports, and at any moment the entire structure might come roaring down in ruins!

At this discovery, I felt once more the impulse to turn back, lest I be buried alive. But once more that inner voice, "Press on! Press on!" controlled my will and mastered my alarm; and, with fierce hammering heart and panting breath, I drew near the source of the light.

Was that the sound of a human voice that I heard above the screeching of the insects? Was it the sound of a human voice wailing and entreating? I could not know; surely, my shaken nerves had deluded me; there was no human being except myself in these vermin-infested depths.

So I told myself; yet it was with a flutter of expectation that I rounded a turn in one of the aisles and came face to face with the source of the light.

That source, as I had anticipated, was an enormous electric orb. It stood high in a glass cage which, unlike all the others I had seen, was still intact; while beneath it, on the ground, several figures were sprawled in lifelike attitudes—figures that were unmistakably human!

"The insects have done their work well," I reflected, grimly; and, biting my lip, I strode close for a clearer view of the stricken ones.

But upon reaching the glass wall, I received a severe surprise. I found myself staring into a face I knew: a gaunt and pallid face, the cheeks furrowed with suffering, the small eyes closed, the wolfish features contorted in the fixed leer of death—the face of the Section Commander!

With a cry of disgust, I drew back; and from the

broken cages to all sides the whirring insects seemed to answer me in derisive chorus.

But I could not yet bring myself to leave the scene of death. Why it was I scarcely knew, but I went wandering slowly about the glass compartment, surveying the pitiful recumbent forms. All of them lay still and rigid; a small-headed woman, hunched up with cheeks pressed against the glass, showed the cadaverous markings of famine; evidently all had been dead for days.

**T**HERE was apparently nothing for me to do but to retire; to make my way as best I could out of this sepulchral place.

With a last dismal glance at the unfortunate, I started slowly to back away. But, as I did so, I was startled to observe that one of the figures—the one that lay furthest from me, in the center of the cage—lifted an arm ever so slightly in a spasmodic jerk. Or did I only imagine that it lifted an arm? Was it not that my tormented senses were again tricking me?

Half convinced that I was the dupe of my own fancies, I stood watching. A moment went by, and nothing happened; another moment, and I was about to turn away again. Then suddenly, the movement, unmistakable this time, was repeated.

My duty was obvious. Since one of the poor, afflicted creatures retained a shred of life, mere humanity demanded that I succor him if possible. If he proved beyond rescue, I must lend what comfort I could to his final hour. There was no reason for hesitation; an instant later, my steel fists had cleared a way for me through the walls, and I stood above the stricken form.

Regardless of the insects that had entered with me and were already whirring and creeping in every corner of the cage, I bent down gently for a glimpse of the sufferer's averted face.

But I was ill prepared for the surprise that awaited me. As I brushed aside the dark locks that had gathered above the cheeks, I had the sense of something vaguely familiar; then, as I stared at the thin, pale profile with the graceful rounded brow and the closed eyes, I cried out in startled wonder, and all but swooned with the excitement of my discovery.

"Luella!" I exclaimed. And I flung myself down beside the fair figure, and like a madman rained out kisses and pleas, and, scarcely knowing what I did, began to rub the cold hands, and warm the marble-like still features, and weep and implore, while vainly I sought to restore life to that unresponsive form.

## CHAPTER XXIII

### The Last Retreat

**I**T was minutes before the sufferer began to show any sign of returning consciousness. But at length, to my inexpressible joy, the pale eyelids rose, and the well remembered blue eyes stared vaguely up at me, in a sort of dazed wonder rather than in recognition. Still, in a delirious anxiety, I labored to restore animation to that half inanimate frame, but at first made slow and uncertain progress. The eyes closed once more, and I did not know how to coax them open again.

But by degrees the faint breathing of the stricken woman became more perceptible, more regular. There came a moment when the eyes opened for the second time, and she stared up at me with what I thought was the trace of a wan smile. Simultaneously, the thin lips quivered and flickered, as though trying to phrase words that would not come; and it seemed to me—

though possibly it was but my desire that spoke—that my name came forth in a struggling whisper.

By this time the insects, creeping and shrilling all about us, had become so annoying as to seriously impede my efforts. Their ugly swarming bands, settling on my legs and arms despite all that I could do, hampered limbs already sufficiently hampered by the armor; while other parties, more damaging by far, began to buzz and crawl greedily about Luella. Soon it became apparent that I had but one course of action, unless I would see her eaten alive; I must carry her to my airship—the one safe spot in all this blighted world—and must there complete the work of reviving her.

I am a fair-sized and rather muscular man, and Luella, never what one would call a large woman, seemed particularly small and light at that moment; yet I undertook the task of my life when I sought to bear her through those long, shadowy, insect-peopled galleries. At first all was easy enough, but her weight seemed to increase as we progressed; at each step my arms, clutched tightly about her slender form, ached more painfully and grew more reluctant to support their burden. But still on and on I stumbled, holding her firmly, yet as gently as I could; on and on, through the darkness beneath the great mysterious cages; on and on, amid torrents of vermin in which I waded ankle-deep; on and on, while unseen flying things, like cyclopean hail-stones, beat and beat against my armor with heavy, thudding blows. At times I had to pause to rest; frequently I halted to turn on my flash-light, lest I be lost amid this realm of ghosts; once or twice I was stricken through and through by hearing something like a groan from the throat of my charge, and on another occasion it seemed to me that she was speaking or trying to speak; but I could neither distinguish her words nor frame a reply, for so loud was the screeching and chirping of the insects that one would have had to yell in order to be understood.

There were moments when it seemed to me that I was battling against the impossible; that I could not press on another yard, but must sink to earth with my precious burden, and be engulfed by the six-footed hordes. But somehow, step by plodding step, I managed to advance; somehow I reached the doorway at the end of the Insect Basements, and fought my way up the swarming corridor to the city level; somehow I retraced a slow, dragging course through the streets, found the city entrance, and regained my airship. Hours must have been occupied in the effort, and even now I cannot say how I succeeded; I only know that the courage of desperation had spurred me on, and that every now and then a quiver, a sigh, a gasp of returning life from Luella had heartened me to persist regardless of aching limbs and struggling breath.

**T**HOUGH near to exhaustion by the time I reached my goal, I could give little heed to my own wants. Having carried Luella safely into the airship and locked the glass door against the insects, I had no thought but to complete the work of rescue. I pressed between her lips a few drops of a powerful stimulant which I always carried, and was gratified to observe that her eyes opened once more, and that just the faintest trace of color came into her cheeks. But she was still too faint to speak, though her lips again quivered, as if to frame words; and as I sat beside her, giving her time to revive, it occurred to me that perhaps what she most needed was nourishment. Accordingly, I prepared about half a glass of a concentrated liquid food that had always served me well; and, with some difficulty, I induced her to swallow the decoction.

The effect was almost magical. In a moment, the

luster had returned to the lusterless eyes; the cheeks showed more unmistakably a trace of red; the patient remained in a sitting posture without the support of my arm, and stared and stared at me as if she now saw me for the first time.

"My beloved!" she exclaimed, in a bewildered sort of way. "Where—where do you come from?"

"From across the ocean, Luella," I started to explain, awkwardly. "I—I have—"

"But I thought you were dead!" she cut me short, with reviving energy; and great tears rolled unchecked down her cheeks. "I thought you were dead! They told me you were!"

"I thought you were dead, too!" I exclaimed. "I thought you, Luella—"

But again she interrupted, still like one in a daze. "I thought I died long ago! It all—it all seems so strange here!"

Evidently the exertion had been too much for her; she sank back into the seat exhausted, and for many minutes could say nothing at all.

During the interval, I helped her to a little more of the liquid food; for it was becoming obvious that she was suffering from sheer starvation. I was pleased to see that the drink revived her; and, having taken

some much needed food myself, I began to explain, in as cursory a fashion as possible, how I had found her in the Insect Basements, and in what manner I had rescued her.

It was much later before I learned her full story; just then she was too weak to give more than fragmentary information. I did, however, insist on asking one question that I could not repress: how she had happened to remain in the Insect Basements, when her last letter had informed me that she had gone to work in a munitions factory.

"I did go to work in a munitions factory. I did go," she replied, speaking with painful difficulty. "But I could not—I could not do the work. And so they sent me back to the Insect Basements. That is all."

The explanation was so simple that it left me almost without reply. "But why did you not let me know?" was all I was able to inquire.

"I tried to. I tried ever so hard. But all my letters came back. At last there was a dreadful one—a dreadful one!—which said you were lost. Oh, my beloved, they said you were lost at the front!"

The last words were uttered with the wailing sorrow of one who had only that moment received the news. At the same time, the tears came forth in a torrent,



I am a fair-sized and rather muscular man, and Luella, never what one would call a large woman, seemed particularly small and light at that moment. I undertook the task of my life when I fought to bear her through those long shadowy insect-peopled galleries.

and the wan cheeks were convulsed with a pitiable sadness. My arm found its way around her waist, and I did my best to console her; but though she spoke no word, she took my hand and clung to it as though she would never let it go.

THE rest of her story held no mystery; I might almost have guessed it even without her subsequent recital. During all the years of the war, she had worked in the Insect Basements; and in the Insect Basements she had remained after the Proclamation of Peace, when the conflict with A-uria gave place to a conflict with the vermin. After the insect swarms had become too numerous to cope with and had taken possession of the city above and of the corridors below, the doors had been flung open and most of the keepers had rushed off in a panicky flight, never to be heard of again; but the Section Commander had held to her post, along with Luella and a few others. Driven from their usual haunts by the rising tide of six-footed things, they had waged a desperate and losing battle, and had been compelled to seek shelter and to face siege in a reserve glass cage, which had contained no insects and consequently had not been broken in the struggle with the destroyers. They had carried with them a small supply of food capsules, in addition to some grains and vegetables originally designed for the insects; but the capsules had soon given out, and the Section Commander and several of her subordinates, trained only to absorb concentrated food, had perished of acute indigestion after eating some cabbage and celery. Luella, who in her early years had lived on vegetables, had fared somewhat better; but the supplies had lasted only a few days, after which she too had been faced with starvation, to which she was on the point of succumbing at the time of my arrival.

All this, however, could prove only of casual interest to me at the moment. The question in my mind, as soon as I was satisfied that Luella was recovering, was how to escape with her from the insects that were infesting the world. We could of course travel in my airship anywhere that we desired—but where was there to go? The vermin occupied all lands alike; nowhere was there a mountain peak or a desert immune from attack; it was not unlikely that I would soon be the last living man.

It was Luella who solved the problem. When, after her revival, I confessed my perplexity to her, she did not look as troubled as I had expected; she smiled faintly, and in her eyes there was a hopeful gleam as she suggested, "Why not go to Borneo?"

Indeed, why not go to Borneo? It was Luella's home, and the habitat of men of superior type—more important still, it contained the only human beings who had not participated in the war, and hence the only ones that had not flooded their land with giant insects. Moreover, being an island, it was immune to insect invasions from any of the continents, and so might prove to be the one unviolated spot upon the planet.

"Yes, Luella, we shall go to Borneo," I replied without hesitation, delighted at her solution of the difficulty. And straightway I began to consult my maps and to make calculations of routes and distances.

THE flight to the East Indies required five days. During all that time, though we were frequently forced to earth in order to avoid storms or to repair the machinery, we did not once step outside the airship—everywhere the insects swarmed in such numbers that we were thankful not to have to walk among them. Had we required any culminating proof of the devastation that had smitten the earth, we should now

have had it in abundance; from the Atlantic to the Pacific we soared across vast reaches of what had once been Europe, Africa and Asia, and in all that enormous expanse, formerly the fountain of the world's culture, we were treated to continual panoramas of ant-hills and termitariums, plains alive with crawling creatures, and an atmosphere monopolized by whirling, buzzing things. There were forests stripped bare of all greenery; once-fertile valleys that showed not one blade of grass; mountain lakes black with tiny wriggling shapes; farm-lands where locusts perished by the horde for lack of a leaf to devour. And the fields were all deserted by man, the mines neglected, the factories abandoned, the roads untenanted and the houses vacant, the cities bare and vermin-infested. Though we strained our eyes, we nowhere caught sight of any two-footed thing; it was as if the final trace of our kind had been wiped from the earth; as if Luella were already the last woman and I the last man.

But we were not the last man and woman. Although every human being had apparently been exterminated in all the great continental areas, there was still one populated island. On arriving at Borneo, we were relieved to find that the insect swarms did not possess the land; the vegetation was flourishing, and the green jungles stretched unbroken beneath our eyes. No sign of man, it is true, was to be seen at first, and we had difficulty in finding our way to any human habitation; but Luella, recognizing a range of hills and a river that she had known from childhood, was eventually able to guide me to the home of her people.

It is needless to dwell upon her joyful reunion with her kindred. It is needless to mention how hospitably they welcomed us both to their cave, how solicitously they attended to our wants, how jubilantly they agreed to our marriage, which was celebrated almost immediately after our arrival. Thenceforth, they insisted, we were to remain with them, never to leave; we were to pass our lives among the hills and forests, planting our grain and tending our cattle, but never returning to the realm of iron cities.

And this, I may add, was to prove particularly easy, since Luella's people were scarcely less charming than she was herself. All, like her, were of normal build, with neither small-heads nor large-heads nor wolf-faces among them; all were amiable and unpretentious of manner, intelligent of aspect—but not too intelligent to be kindly—lovers of nature and beauty, but limited by no self-conscious superiority. There were only a few thousand of them, and they all dwelt together communistically in one great cave; their desires and their wants were simplicity itself, they knew no such thing as greed or personal ambition; hence they were capable of happiness.

They were amazed at the news of the great war that had convulsed the earth and extinguished all the more civilized races; here, in their remote fastnesses, no echo or tremor of the cataclysm had reached them. They received the tidings in various ways. While they were grieved at the universal destruction and suffering, they rejoiced to know that they were free forever of the persecutors who had hounded them for ages, reducing their numbers to a handful, and forcing them to hide amid the shadows of the cave. And they were happy that they need live underground no longer; once more they might dwell in the sunlight, and build themselves houses wherein to thrive and multiply.

\* \* \*

MORE than twenty years have passed since the events narrated above. I sit to-day on the veranda of a vine-wreathed cottage, Luella smiling at my side, our

children gaily at work in the fields before our dwelling. And I write these words in order that those who come after me may know of the world that has been. To-day there is no man on earth save only on this blessed island of ours; in all other regions the insects still reign, warring with one another, threatening to exterminate one another, but allowing no foothold for our species. Yet perhaps at some far-off time—five hundred years from now, or five thousand—our sons shall wax so numerous and so strong as to venture away from this land; and then they may do battle with the insect, and seek to win back the lost heritage of their kind. The conflict will be an arduous one, and they will be far from certain to

succeed; but if they do succeed, let us trust that they will lay the foundations of an abler and less rapacious race than that which preceded them. And let us hope that they will have the wisdom not to repeat old errors, and the far-sightedness not to be always in arms against their kind, and the forbearance to tolerate, even when they cannot understand, and to create, when they crave to destroy. Otherwise, the story that I am writing may be re-lived at some remote date: fifteen thousand years hence one of our descendants will stand, as I have stood, above the ruins of a world shuddering to behold the last man crushed beneath the jaws of foes that man himself has summoned into being.

THE END.

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# LOCKED WORLDS

By Edmond Hamilton

## CHAPTER I

**I**N giving this record to the world, it has not been my purpose to enter into the speculation and discussion aroused by some phases of it. Rather it has been my intention to present only my personal experience of the matter, from its first beginning with Dr. Adams' sensational theory to its mighty, world-shaking end. For these reasons, therefore, I have striven throughout to avoid all questions of controversy, and except for some facts which were public knowledge at the time, have confined my account entirely to those things which I either saw or did.

It is with Dr. Adams himself that I choose to begin. For more than a dozen years he had been the head of the Physics Department at Northeastern University, where I held my one humble instructorship in English, and where his work had raised him to the level of the very highest authorities in his chosen field of science. Though still on the best side of forty, his additions to atomic science had made his name known to physicists in laboratories and lecture-halls across half the world. He was, without doubt, the most noted figure at Northeastern, and was at the same time the least-liked.

Tall, dark and bitter, with black, probing eyes and a turn for satire that could cut like a whiplash, he was decidedly antagonistic to most people. Among us of the faculty, indeed, he had no close friends or intimates whatever, with the exception of young Rawlins, his instructor-assistant, who was a particular friend of my own and as much liked as his superior was disliked. I do not think, myself, that Rawlins had any more real liking for Dr. Adams than any of us, but the physicist's great scientific attainments had ennobled him in the eyes of the younger man, who would never listen to anything we might say against his superior.

There was much that was said against him, indeed, since Adams' brusque manners and contemptuous indifference to his colleagues could not fail to rub some of us the wrong way. We frankly disliked him, and were not slow in expressing our dislike, yet at the same time, even among ourselves, we respected him. The man's utter, fierce devotion to his science would have won that respect from anyone, and it was heightened by the great work he had done and was doing. Much of that work, it was true, was so highly technical in nature that we could not understand it, for all Rawlins' enthusiastic explanations, but we did compre-

hend that Adams was doing revolutionary things in the field of atomic structure.

He had followed in the steps of Thomson and Rutherford in his special study of the atom, that inconceivably minute particle of elemental matter which was once considered indivisible, but which we now know is composed of a varying number of electrons, or tiny negative charges of electricity, revolving about a central positive charge or charges, the nucleus. It is intensely delicate work, the most delicate, indeed, in all science, this study of the natures of atoms and the movements of electrons. For though they are never to be seen, in their incredible smallness, by even the most powerful of man's microscopes, yet they may be studied and investigated through their effects upon larger and visible particles of matter.

In this work Adams had gone far, and was considered, as we all knew, as ranking with the greatest of the English and German physicists in his atomic and electronic investigations. He had been one of the first to suggest the possibility of discharging electrons in controlled streams, the so-called cathode rays. He had partly anticipated and duplicated the famous Rutherford experiments, in which actual transmutation of elements

had been accomplished by taking electrons from the atomic structure. It seemed, indeed, that he was but rising to new heights of achievement and fame, when there came suddenly, darkening all that he had already done, the publication of his sensational "interlocking atom" theory.

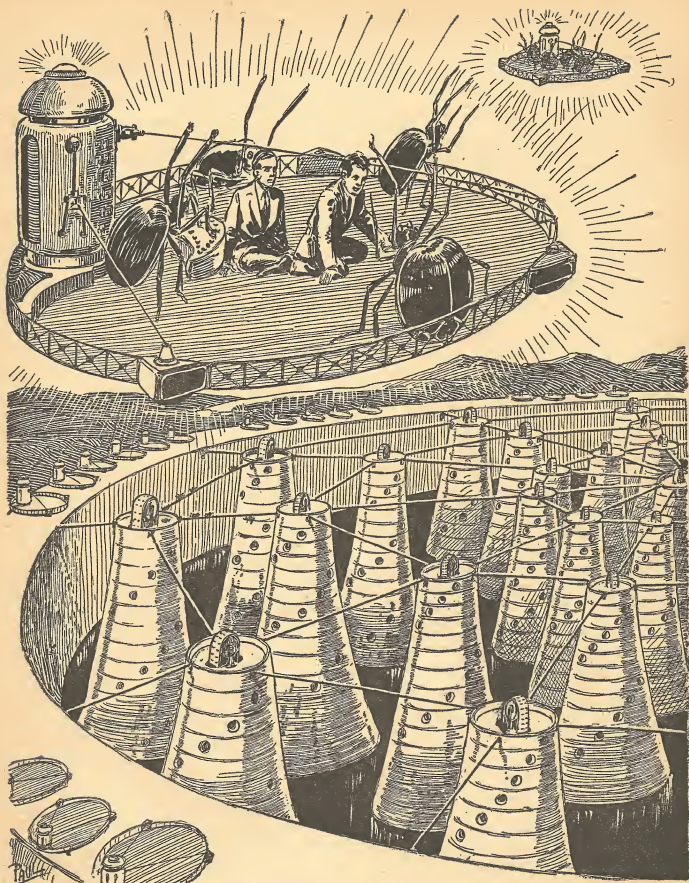
It was late in April that we of the university first heard of Adams' new theory, through Rawlins, who had taken some part in the experiments leading up to it, and who was very enthusiastic concerning it. His lengthy and involved explanations of it were too technical for us, and I waved him aside in mock horror when he began them, but a few weeks later Adams' monograph concerning it was published, and the sensation which it aroused stirred in all of us some interest in the thing. Partly by a reading of the monograph, whole sections of which were far too technical for my wits, and partly through Rawlins' eager accounts, I managed to get a fairly clear idea of the theory, which within a week or so of publication was kicking up a tempest in a teapot among all right-thinking physicists.

**A**DAMS prefaced the body of his monograph by stating that the main interest of his whole scientific career had lain in the study of atomic structure,

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*As an experiment in evolution, Mr. Hamilton presents us with a number of original ideas which are not so preposterous as they may seem at first blush. Humanity, during untold thousands of years, has domesticated a great many animals, from the horse down to the cat, all of whom at one time were wild and more or less ferocious. Even insects have been trained to perform amazing feats, so the author's ideas will not appear quite so far-fetched in the light of what has happened before in human progress.*

*We know you will enjoy this story, and we know it will cause endless discussion and comment from our readers, as was the case with the author's other story, "The Comet Doom."*



On and on we sped, high above the rolling blue plains, beneath the blazing bluish sun that was slipping down toward the horizon from the zenith.... At last our progress seemed to slacken slightly, and as I raised myself from the crouching position which we had assumed on the platform's floor, I could make out an outline of great black structures, which could only be a city of some sort.

and that he had now to present a new theory concerning that structure whose implications were revolutionary to certain accepted physical laws. He began by pointing out that the spaces between the revolving electrons of each atom are quite immense in proportion to their size. The planets that whirl about our sun, indeed, are not proportionately farther from each other than are the electrons of every atom. It was from a study of these spaces that Adams had brought forth his theory.

"During experiments of the last few months," he wrote, "I have been primarily concerned with a study of the motions and spacing of the revolving electrons of the atom, and have discovered a startling fact. You know that it has been suggested by scientists and by fiction writers that there might exist electronic systems, or atoms, wholly independent of the electronic systems which are our atoms, electronic systems which move through our electronic systems and form totally different atoms and worlds. This suggestion has been made many times, but without any basis of fact or truth, since we know that such electronic systems could not move through our own electronic systems without the nuclei of the one crashing into the nuclei of the other and destroying all, just as solar systems could not move through other solar systems without the suns of one crashing into the suns of the other and destroying both. Scientists have long known, though, that inside the electronic systems which are our atoms, there exist what seem to be stray electrons, electrons which revolve in an opposite direction to our electrons, though about the same nuclei. For we have learned that just as the planets of our solar system all revolve about our sun in the same direction, so in every atom of our world do the electrons revolve about their nucleus in the same direction, each one of our atoms being exactly like all the rest in the direction in which its electrons revolve about their nucleus. Yet in our atoms there exist, also, as I have said, these stray electrons, which do not belong to our own electronic systems, but revolve about the same nuclei in an opposite direction.

"Suppose that this were the case in our universe, suppose that beside the planets of our own solar system there were planets which revolved about our sun in an opposite direction to our own. You see what that would mean? It would mean that in our one universe there would be two solar systems instead of one, two solar systems moving about the same sun, but entirely apart and distinct from each other, two solar systems locked together in the space of one planetary universe, moving about the same sun, yet totally different from each other by reason of their opposite motions. And it is the same, I have found, in the atoms, the electronic systems, of our world, our universe. For these electrons which we have considered stray electrons, and which move about the same nuclei as ours but in an opposite direction, form electronic systems totally different from our own; they are locked in the same space and move about the same nuclei, form atoms locked within our atoms and unknown and unseen to us, form worlds locked within our worlds. Unknown to and unseen by us, those worlds, those atoms, for though locked within our own worlds and atoms they seem to us only stray electrons, infinitely tiny electrical charges, moving opposite to *their* electronic systems. While to those other atoms, to a dweller in the world locked in ours, our world in turn would seem only stray electrons moving opposite to *their* electronic systems. Just as if, were two opposite-moving solar systems locked together about the same sun as I have suggested, each would seem to the other only a few stray planets moving through their own system, neither system guess-

ing or dreaming that an equally real and concrete system was locked within itself.

"Thus have we two worlds, our own and that interlocking one, the atoms of each one locked within the atoms of the other, their electrons moving in opposite directions about the same nuclei, yet neither world dreaming of the existence of the other. And an atom of one kind in one world might be interlocked with an atom of a totally different kind in the other, though their nuclei were one and the same. Two electrons revolving about their nucleus in one direction might form an atom of helium in this world, whereas if but one electron revolved about the same nucleus in the opposite direction, it would form in the interlocking world not an atom of helium but an atom of hydrogen. Thus we might have two totally different worlds, two universes, locked together atom within atom, and yet separated from each other by a gulf proportionately greater than that between the stars by the fact that though their electrons revolve about the same nuclei, they revolve in opposite directions.

"But suppose you take the helium atom in this world, with its two revolving electrons, and with one electron revolving in the opposite direction to form a hydrogen atom in the interlocking world, and suppose you reverse the motions of both electronic systems at the same moment, setting the two electrons revolving in the former direction of the one, and the one in the former direction of the two. If you were merely to halt the motions of the electrons you would only annihilate both atoms instantly, but if you were to reverse them as I have suggested, then you would have changed the two-electron atom of helium in this world into a one-electron atom of hydrogen, and at the same time would have changed the corresponding one-electron atom of hydrogen in the interlocking world into a two-electron atom of helium. In other words, you would have transposed your atom of helium in this world into the interlocking world, and would have transposed the corresponding atom of hydrogen in that world into this one. If men can control the motions of electrons as they have done in the cathode rays and in the transmutation of elements, there is no reason why they cannot sometime control them so as to be able to accomplish this reversal of electronic motions. And when they can do so, they will be able to transpose any atoms, any matter that atoms make up, from this world into the interlocking one, and the corresponding matter of that world into this one, and can enter that world at will."

These were the most significant paragraphs in Adams' first statement of his theory, and, reading them, one is hardly surprised by the criticism which they called forth, criticism of a bitterness almost unprecedented in the realms of scientific discussion. That bitterness, I think, was intensified by the contemptuous indifference with which Adams had always treated the majority of his fellow physicists, and which had made for him a host of enemies. Even without those enemies, so radical a theory as his would have met with a rough reception, no doubt, but when the critics of that theory were almost unanimous in disliking the man who had propounded it, it is not astonishing that their opinions of it were of an unusually cutting nature.

The idea of the interlocking of atoms, of two wholly different electronic systems moving in opposite directions about the same nucleus, was assailed and derided on all sides, only a few unimportant physicists here and there admitted that it might be possible. The great majority of Adams' fellow-scientists, to their own discredit, did not refute or attack his propositions by data of their own or by logical objections, but instead

simply asked whether any sane person could believe that two atoms or electronic systems could interlock with each other about the same nucleus, or that two masses of concrete matter, two worlds, could exist in the same space at the same time, yet each wholly invisible to and unsuspected by the other. They admitted that Adams' account of the loose or stray electrons discovered moving through the spaces between the electrons of our own atomic structures was correct, but denied that these formed any electronic system of their own, since, as they pointed out, their motions and existence had already been plausibly explained in a score of different ways. They concluded their attacks, for the most part, by demanding that Adams bring forward the experimental proof of his theory, which he had mentioned in his monograph.

I THINK now that in the case of a lesser man, the whole theory would only have been contemptuously dismissed, rather than attacked with such force. It was too good a chance against the satiric and arrogant Adams for his enemies to miss, and instead of dropping the matter after their first attacks they continued to press him for proof or for retraction of his theory. Adams himself seemed to pay no attention whatever to his critics, deigning no reply to them, but there was a set look in his face and a growing fierceness in his eyes that boded ill. I cannot deny that among the rest of us at the university there was no little satisfaction in seeing the sarcastic physicist thus humbled, though we all felt that the process was being carried a little too far. But Rawlins was still on the side of his superior, and was of the belief that in time the latter would vindicate his theory with irrefutable evidence.

"He's given up everything else, and is working late each night with these atomic structure experiments," Rawlins told me, as we lounged with our pipes one evening in my rooms. "He's going on with the same work that led up to his theory, and though he won't let me in with him now, I think that he'll succeed yet, and prove the whole thing up to the hilt."

"Prove fiddlesticks," I retorted unbelievably. "He must be as insane as his own theory to try to find proof for it."

Rawlins shook his head. "I don't know. The theory seems a wild one, of course, but Adams is not the kind to go off half-cocked, and the extra-electronic motions his theory's built on do exist—I went far enough with him in his experiments to know that."

I laughed. "It would take more than a few extra electrons zipping between our own to make me believe that solid matter can interlock with solid matter, world with world," I told him.

The greater number of those at the university, whatever their scientific attainments, were of my opinion, and it became evident that, beneath their disapproval and the unceasing criticism from without, Adams' position was becoming daily more uncomfortable. We heard, in a roundabout way, that the university's venerable president had paid a friendly call upon Adams and had urged him to clear up the whole business and prevent the university's name from being lowered by an undignified academic brawl, by presenting his proof, if he had any, or by retracting his statements. To this suggestion, as we learned later, Adams had replied in vitriolic terms, stating calmly that it was not his custom to spend his time convincing idiots of what he himself knew to be true, and that the agitation and controversy of the scientific world over his statements did not concern him in the least. He also added, for the benefit of the president, that he was but little con-

cerned with the good or bad name of the university, since he counted himself a scientist and scholar rather than an academic politician.

Any lesser man, speaking thus, would have insured his own instant dismissal, and we expected momentarily to hear of Adams' dismissal. The whole matter, indeed, seemed to be rising into an open uproar, for the attacks upon the physicist had been increased and intensified by his own contemptuous silence. The thing could hardly be kept from breaking into an open row much longer, we knew, and we waited, with a certain zest, I must admit, for the opening of the battle. And then, with anti-climactic effect, Adams did the thing none of us had ever dreamed he would do. He shirked the coming battle and left the university.

It was between days that he left, unknown to and unseen by any in the whole institution, so far as could be learned. Rawlins reported that he had worked late in his laboratory on the night before, so late, indeed, that none had been awake to see him leave the building. The lights he had left burning in the place, and a curious tangle of complicated apparatus was found there whose purpose none could fathom. There was a great disk of shining metal some ten feet in diameter, lying on the laboratory floor, with a similar great disk suspended some eight feet directly above it, the two being connected to a mass of strange-looking generators, coils and switches. On the disk on the floor was a round section or mass of a curious blue clay or soil, several inches deep, and which it was assumed that Adams had been testing. It seemed strange that he should have left the laboratory in such disorder, but a visit to his rooms had disclosed the fact that the same conditions prevailed there; only a few of his possessions were gone; the rest was carelessly left. It was the exit of a fugitive, of a coward, that he had made, we agreed, and the strange note which he had left for the president did not change our opinion.

That brief note, which was read to us at the next meeting of the faculty, was so strange indeed as almost to hint the possibility of a disordered mind. It read:

I am leaving the university and my position in the world of men for reasons which must be quite clear to all. Having made one of the greatest additions to scientific knowledge ever made by man, I have found myself subjected to unceasing ridicule and criticism. The world, in the person of its so-called scientific men, has demanded that I either retract my theory or present proof of it. I cannot retract that which I know to be true, but I can and will present proof, proof which even this ignorant and incredulous world will be forced to accept; proof which, I venture to assert, this world and all upon it shall never to their end forget.

WITH the reading of that amazing note we all, I think, came to look on Adams as a self-deluded fakir who had fled with only one final burst of bravado. The note itself, of course, was never given to the public, but it was known that Adams had left the university secretly and without controversy, and that proved to the satisfaction of all that the physicist's pretensions had been demolished by the devastating criticism levelled against them. None of us knew where Adams might have gone, and not one of us, with the exception of Rawlins, was much interested in the question. Adams' incomprehensible masses of apparatus were cleared away, another man took his place as the department head, and within a few weeks all was as quiet and serene as before the publication of Adams' crazy theory.

It was all of a month after the sensation of it had

subsided that Rawlins came to my rooms, one June evening, with a strange thoughtfulness apparent in his face and manner. He had taken to heart, more than any of us, the affair in which his superior had been implicated, but I had thought that he had put the matter from his mind since then, especially since he had not mentioned it to any of us. On this evening, however, after sitting silent for a time, smoking, he turned suddenly to me with a question.

"Harker, does it ever occur to you to wonder where Adams went?"

I looked sharply up at the question. "Why, no," I answered, with some surprise. "He left so strangely—I suppose he just went off somewhere to get clear of the whole affair."

"He left strangely, yes," said Rawlins. "But for where? All his belongings, almost, he left behind him. No one at all saw him go, and though I've made inquiries, he's never been heard from since that night."

I was startled. "But he must have gone somewhere," I protested. "What are you getting at, Rawlins?"

My companion paused a moment before replying. "Harker," he finally said, "I knew Adams as well as anyone here, and though I had no personal liking for him, I know that he was not the type to run away from a battle. He was working day and night on his experiments through all that affair, working to get positive proof of his theory, to actually prove the existence of the interlocking world by transposing matter from this world to that, and from that to this. And if his experiments succeeded, as I believe they did, then he could well have performed the experiment on himself and transposed himself into that interlocking world."

"Good Lord, Rawlins!" I exclaimed. "You believe that? Believe that he was right about his interlocking world, and instead of leaving that night, transposed himself into that world?"

He nodded. "Yes. He went into the laboratory that night, Harker, but none ever saw him leave it. If he left it, he must have left it by that great disk-apparatus he had built, transposing himself by it into the world whose atoms interlock ours. I have studied that apparatus and I now firmly believe that it was built for that purpose, since it projects, from the upper disk to the lower, a ray similar to the radioactive rays used to break down atomic structures by Rutherford, a ray which halts the revolution of electrons in any matter on the lower disk and reverses their motions, causes them to revolve about their nuclei in the opposite direction, at the same time reversing the motions of the other electrons, the other electronic system, transposing the matter on the disk into the interlocking world, and the corresponding matter in that world into this one. You remember the mass of strange blue clay found on the disk? What was that, but the corresponding matter in the interlocking world, flashed into this one as the ray flashed Adams himself into that world?"

"It seems possible," I admitted, staggered by the idea, "yet the whole thing is so strange. Why should he want to go into that other world, even if he could? Why not call his critics together and show them the thing for proof?"

Rawlins shook his head. "He was a strange man, Harker, a monomaniac in some ways, I think. His anger against his critics, against the world that condemned him, was intense, for all his silence, and it was not justice that he wanted, but revenge. I think that he went into that interlocking world with his anger against our own world flaming high, determined, as he stated in his last note, to give it a proof, a terrible proof, that it would never forget. And I think that

that proof, that terror, is hovering now above an unsuspecting world."

He reached into a pocket, drew forth a few newspaper clippings, and handed one to me. "This appeared in a New York paper over two weeks ago," he said. "I wonder if you will see in it the importance that I do."

I took the little article in my hand. It was not more than a few inches in length, apparently a brief cable dispatch.

"Paramaribo, Dutch Guiana, May 26. Officials of the trading post located here report that an intense excitement of some sort appears to be stirring the native tribes in the little-known region in the southern interior. The natives assert that a small hill lying a few miles from their principal village vanished suddenly a few nights ago in full view of all the village, without quake or disturbance of any kind, being replaced by a round patch of bluish soil. An intense panic has swept over all near-by tribes as a result of this story. It is believed at this place that the foundation of the tale is a landslide or earthquake of some sort, exaggerated by native superstition, though no such disturbances have been noticed here."

I raised my eyes to Rawlins', wondering. "I can't see the significance of that," I told him.

"Neither did I, at first," he said. "But read this one."

The second clipping he handed me was somewhat longer than the first, dated a few days later, and had evidently been written in a jocular vein by some humorous reporter. It read:

#### CAP'N JONAH OUTDONE BY MODERN MARINERS

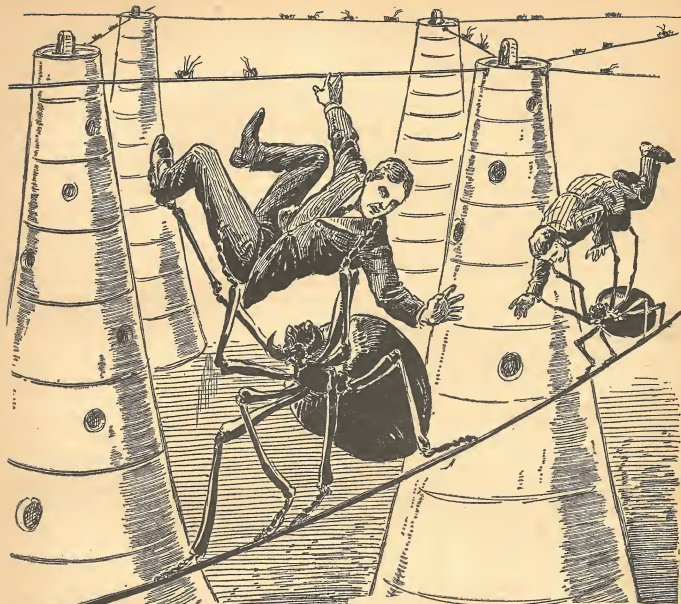
First Mate and Operator of Steamship *Cherokee* Report Appearance of Floating Island

"New York, May 29. The age-old laurels of Captain Jonah as a teller of tall sea-tales are apparently in danger of being awarded to Robert Simms and E. Riley, First Mate and Radio Operator of the Blue Line freighter *Cherokee*, which arrived here from Hamburg yesterday morning.

"The two men in question are vehement in asserting the truth of their story, though their shipmates put it all down to the influence of the moonlight. It occurred, they say, on the night of the 26th, when the *Cherokee* was still several hundred miles east of New York. The mate was on the bridge, that night, and was joined shortly before midnight, he says, by the operator, Riley. They deny that any liquid refreshments were indulged in, and assert that they were both gazing over the moonlit sea when the thing happened.

"Both Simms and Riley are rather confused, unfortunately, as to just what did happen, but the kernel of their tale is that suddenly, in the sea a few hundred yards from the ship, a great circle of the waters seemed to vanish abruptly, without any unusual sound, to be replaced in the same instant by a great circle of solid ground of the same size, which hovered on the waters for a moment like a floating island and then sank from sight. It all happened so quickly, they assert, that they had no time to call any of their shipmates.

"Neither of the two men profess to know from where the island appeared so quickly and quietly, and as they assert that it was not there a mo-



For the moment my heart pounded with fear as they bore us out along that airy way above the city, walking forward on that slender cable as easily as we might have done upon a sidewalk, their multiple limbs grasping it and holding it tightly.

am convinced is that the liquor sold in Hamburg is of a very high power.' With Captain Cappen's opinion, the unbelieving world at large will very probably agree."

I looked up from that clipping with the strange idea of what Rawlins was driving at dawning across my mind. Silently I took the last one which he held out, and hastily scanned it. It was as brief as the first one, an inch-long press-note from a small Iowa town.

"Gorland, Iowa, May 29. J. N. Lurkan, a farmer residing some six miles south of this community, has reported an odd change in soil which has attracted some attention in this section. He states that a day ago he discovered that a section of pasture-land on his farm, acres in extent, had changed overnight from close-cropped pasture to a barren blue clay unlike any ever seen in this section. The section of ground affected was in the shape of a great circle, apparently, and as it is a little lower in level than the surrounding ground, it is his opinion that a washout of some kind must

ment before, it could only have been a submersible island coming up for a breath of air. As the remainder of the crew saw nothing of it, however, it is likely that the instantaneous island will be ignored by the geographers. When asked for his opinion on it, Captain Martin Cappen, master of the *Cherokee*, replied, 'The only thing of which I

have stripped away the ground from above it. Neighbors, however, say that this is impossible since there have been no heavy rains in that district for the last few weeks."

I laid down that clipping and Rawlins and I stared at each other silently, intently. My brain was spinning with the thing that had suggested itself from a reading of those three clippings, a thing too stupendous and undreamed-of ever to happen, it seemed, and yet one that apparently had happened. At last the voice of Rawlins broke the silence.

"You see the similarity of these three happenings, Harker? In each case a circle of familiar matter was whiffed away and replaced by one of unfamiliar matter, the hill, the circle of ocean, and the circle of farmland, the first and the last being replaced, as you see, by a strange blue clay, a strange blue clay which we too found there on the disk in the laboratory. And that can mean but one thing—can mean only that Adams transposed himself into that interlocking world and now, using the same principle, has transposed great sections of our world into that one, from Guiana and the Atlantic and Iowa."

"But why?" I asked, and his face grew grave.

"I think that I can guess why," he said, slowly. "Adams went into that world mad for vengeance upon this one, and now he is able, apparently, to transpose great sections of matter from world to world at will. I think that these first transpositions are but tests, and that since they have been successful the hour of his vengeance is at hand. And that vengeance—what will it be? Cities and millions of humans whirled into that world by his power, replaced here on earth by the barren clay of that world? Seas of that world, maybe, transposed to this one and released to drown humanity? Strange beasts, strange beings, sent into our world to destroy and kill?"

I shrank from that awful vision. "But what can we do?" I cried, and then Rawlins' eyes gleamed with purpose.

"There is but one thing that we can do," he said. "We have that disk-like apparatus by which Adams himself went into the interlocking world, and whose purpose I alone here have guessed. With that we can go after him, Harker, can follow him into that interlocking world and, if need be, destroy him, before we allow his terrible work to go on, before our world awakes to find red ruin crashing down upon it. Others would not believe me, would not credit this thing, I know, but you will, Harker. Into that interlocking world went Adams, and after him we two must go!"

I was silent, stunned, at Rawlins' suggestion. The whole thing seemed so fantastic, so incredible, yet I knew that he was right and that it was true; that in that unknown world, locked so strangely with our own, atom within atom, the vengeful Adams was beginning his deadly work, preparing to send God knew what horrors upon the races of man. To venture after him, to burst into that world so near and yet so infinitely far, to cross the vast abyss that separated electron from electron, and plunge into a new, strange world, that was a project appalling in its audacity. But as my brain steadied I saw clearly that Rawlins was right, that we two must follow and find him before he could complete his work of doom. I rose, then, and gave my friend my hand.

"We'll do it," I said, simply. "And God grant that we reach him in time."

THE days that followed live in my memory now as a confused period of swift preparations, many of

which were quite incomprehensible to me. Rawlins had examined the great disk-apparatus and had managed to remove it to the little room that was his private laboratory, where we made a further investigation of it. It was long before we could solve the secret of the numberless connections which joined it to the ray-generators Adams had devised, but when we finally did so, we found that its operation was simple enough. We placed a stone on the lower disk, for a test, and swiftly pulled down the long lever-switch that stood beside it and that governed the intensity of the ray. At once a flood of blinding white light poured down from the upper disk upon the stone, and in an instant it had vanished, while where it had lain was now a little mass of pale blue clay or soil, in which were a few shining, unfamiliar little pebbles, or rocks. It was the corresponding matter of the world locked with our own, transferred into our own as the stone was transferred to that, by the reversal of the motions of its electronic systems, or atoms. As Rawlins pointed out, it was highly important that the ray be turned on at its full intensity, so as to reverse the motion of both electronic systems and transpose them from one world to the other. Were the ray not fully turned on, it would not have power enough to cause that reversal, it would only stop the motion of both electronic systems about their nucleus, resulting in the instant annihilation of both atoms, which is to say, the annihilation of the sections of matter affected in each of the two locked worlds.

We were satisfied with that test, however, and at once set to work to make a duplicate of the transposition apparatus itself, so that we could take this duplicate apparatus with us into the interlocking world and so have a means of returning at will. It was this construction of a duplicate apparatus which proved our hardest task, but we finally achieved it by copying minutely Adams' original apparatus, though much of the work which we did in this way was but little understood by either of us. At last, the duplicate apparatus was complete, and after making a similar test of it, which proved it to be satisfactory, we packed it into as convenient a form as possible and began to hastily assemble the remainder of our equipment.

Rough clothing, heavy automatics, and a supply of concentrated food tablets were the main items in our small outfit, and we took only a few days in assembling it and completing our last preparations. It was near the end of June that we finally found all ready, and prepared to make our start. We had taken nobody into our confidence regarding our plans, knowing well that we should only have been met by the same skepticism and ridicule which had been allotted to Adams himself. We had given out that we were leaving for a vacation, and since we would begin our novel journey in Rawlins' little laboratory, where the big transposition-apparatus was now locked up, we had no fears that our strange departure or absence would be noticed.

At last all our preparations were finished and all was ready for our start. We had agreed to make that start at night. As we walked silently across the campus that evening, toward the great gray stone building that housed our little laboratory, the thing which we were about to do seemed utterly incredible. A June night—with the scent of flowers strong on the soft breeze, with the sound of laughter rippling through the darkness from houses at the campus' edge, with the young moon peering down upon us through the trees as we walked on. It seemed fantastic, I thought, that we were actually to venture into a new and unknown world that night. It seemed utterly beyond belief that within minutes more we would be farther from this familiar scene

than the farthest of the calm stars above, and yet we would have moved no distance from it at all, at least as we humans think of distance.

Silent with that thought, we walked up into the big building, entered our little room, and after double-locking its door, turned to the apparatus that all but filled the room. The great metal disk on the floor, the similar disk swung ten feet above it, the masses of apparatus grouped beside them—they seemed to be silently awaiting us. It was but the work of a moment to pile our equipment and apparatus neatly upon the lower disk, leaving room for ourselves. Then Rawlins turned toward that disk.

"Time to go," he said, calmly.

With these words he stepped lightly upon the lower disk, and slowly I stepped beside him. We took a last look around the crowded little electric-lit laboratory, and then Rawlins reached toward the big lever-switch that rose on a metal standard beside the lower disk. He grasped it, hesitated a moment, and I felt my breathing tightening. I think that in that moment the same thought, the same icy dread of the unknown, was racing through both our minds. What was awaiting us on the other side, in that strange world locked with ours? The sheer unearthliness of the whole business was gripping us, at the last moment. Suddenly I saw Rawlins' jaw tighten, and he abruptly jerked down the switch.

The next moment there was a blinding glare of light from the disk above us, a light, a force, that flooded deep upon us and that in that moment seemed to strike deep into the inmost center of my being, seemed to shake me like a leaf tossed by gigantic winds. Only for a split-second did that light bathe us, and then the little laboratory whirled about me for an instant with immense speed. I seemed to be falling, falling, reeling down through unthinkable abysses, and then light and consciousness alike had left me as I sank into a roaring blackness.

## CHAPTER II.

I OPENED my eyes to a glare of sunlight that caused me to swiftly close them, a white and dazzling illumination that for the moment blinded me, and that beat down upon me with a torrid warmth. In a moment, through half-opened lids, I was able to see that I was lying on the bare ground at the bottom of a small bowl-shaped depression, or crater, with Rawlins lying beside me and our equipment and apparatus lying around us. Then I saw his eyes opening, too, and in a moment more we had got to our feet and were gazing about us.

The first thing that drew my attention was the sun above us. It was of the same size as our own sun, as near as I could judge, but was utterly different. It was blue white and intensely brilliant, its fierce white light and heat a complete contrast to the light of our own yellow star. It was the sight of that strange sun, I think, that first beat into my dazed brain the fact that we had succeeded, and had actually projected ourselves into the world locked with our own. And as Rawlins in turn gazed upward, his face lit up.

"We're there, Harker!" he exclaimed. "We've come through!"

Now, as I gazed about, I saw how unearthly a world it was into which we had come. Standing at the bottom of the little crater, our view was limited by its rim a half-dozen feet above us, but even within its bounds there was difference enough. The ground beneath and around us, we saw, was the same pale blue clay which we had already seen, and whose tinge had,

perhaps, some relation to the blue-white sun above us. Here and there in it were white, shining rocks and pebbles, while along the crater's sides were little clumps of vegetation of a deeper blue, strange, twisted little growths, which at first seemed not extraordinary, save for their color. As I watched them, though, I cried out to Rawlins. For the little clumps, I saw, were moving, moving slowly along the crater's side. They had no roots at all, we saw, but had strange little tendrils which they thrust into the ground as they moved along the barren soil. For all the world they resembled browsing animals, as they slowly passed along, and that, we learned later, was in reality what they were, the barrenness of this world's soil developing in the growths upon it a power to move about and gather their nourishment wherever it might be found.

For the time being, though, we could only guess at that explanation, and watched the browsing plants passing slowly along the crater's side with something akin to horror. In a moment more they had passed up over the crater's rim and had disappeared from view, though still we could catch sight of their blue tips as they moved slowly about. I turned to Rawlins, with the suggestion that we clamber up after them and survey the landscape from the crater's rim, but before the words could pass my lips he had uttered a cry that made me whirl around, and then stand as one transfixed, gazing up with him to the crater's rim above him. For a thing, a creature, had appeared there, whose appearance froze us into a momentary inaction of terror.

I can only describe my first impression of that creature by the statement that it resembled a huge spider, great and black and horrible. There were some eight stiff, jointed limbs, black and smooth and powerful, which combined to support, perhaps five feet above the ground, a black, bulbous mass that was head and body combined, from the bottom of which two additional short and powerful mandibles or arms extended, and from which two strange, dark pupil-less eyes stared down upon us, dark, shining and uninking eyes whose steady gaze held us there as though hypnotized. Only a moment the thing stood motionless, staring down upon us, and then from an orifice at its bulbous body's base came a high, shrill scraping cry, while at the same moment it hurled itself down the crater's side toward us.

As one in the grip of some terrific nightmare I saw it rushing down upon us, and then it was on us, gripping both of us in an instant with the two short, powerful arms or mandibles, hurling us to the ground. It had gripped me by the throat, and before the paralysis of amazement and fear which had gripped me had vanished, the arm that had grasped me was tightening around my windpipe, squeezing, strangling, choking me. I struck out blindly, helplessly, in that unweakening grip, and heard a hoarse cry from Rawlins as we whirled about on the bottom of the little crater in wild combat with the thing, its dark, uninking eyes staring dreadfully into our own as we clung and battled together. My senses began to leave me, as that remorseless grip closed tighter around my throat, and then I saw Rawlins' heavy belt-knife flash in his hand, heard another high, shrill cry from the creature that held us and then a dull, ripping sound. The next moment the grip that held me had relaxed, and as I staggered to my feet I saw the thing that had held us slump limply down on to the ground, a black, thick fluid oozing from the side of its bulbous head-body, where Rawlins' knife had pierced it.

He too was scrambling to his feet beside me, and for a moment we contemplated each other, panting and dishevelled, with wild eyes. Then we suddenly stiffened.

From above us had come a score or more of high, shrill vibrant cries like that of the creature at our feet, and as we gazed up we saw appear on the edge of the crater, above us, a full two dozen of similar creatures, who stopped there and surveyed us like the first. Some of these, though, carried long, slender, needle-like rods of black metal in their short arms, and these they aimed instantly in our direction. It was plain that they were weapons of some sort, and, as we stood motionless and tense beneath their menace, the spider-creatures came down toward us.

I SAW them inspect the body of the thing at our feet, then one uttered an order, and from one of the needle-like rods there flashed forth a slender bright orange ray which struck the limp body squarely. As it did so the shattered body vanished at once, beneath our eyes, and the brilliant ray was snapped off. Later we were to learn, what I half-suspected then, that the brilliant orange ray owed its effect to the acceleration of molecular motions which it caused. The molecules which make up any object are in constant motion, an unceasing motion exhibited by the so-called Brownian movement, and though the object which they make up retains its form without change, it is only because their motions are limited in extent. The orange ray accelerated those motions by causing mutual repulsions between the molecules, which caused them to fly off in every direction, completely annihilating any object which they had made up.

Now, however, we waited tensely, expecting each moment that the brilliant ray would flash forth in destruction toward ourselves, in revenge for the one we had killed, and there was an instant's pause and silence. The whole scene, impressed unforgetably on my brain in that passing moment of stillness, was one of unearthliness beyond all telling. The blue soil, the azure vegetation moving slowly about, the blazing sun whose blue-white brilliance fell upon us, the weird creatures who stood before us—they made up a picture of fantastic grotesqueness, more fantastic, to me, because I knew that even at that instant, at the very spot where we stood, was the familiar, quiet little laboratory which we had left a few moments before, the world of ours so infinitely far from, and yet so closely locked with, this one.

A moment only the things examined us, their strange eyes roving over the equipment and apparatus which lay about us, and then one stepped forward and swiftly removed from us our weapons and all other objects on our persons. That done, one of them who seemed a leader, uttered a high-pitched, vibrant little cry, pointed with one short arm up toward the crater's rim, and at the same time turned his slender ray-rod full upon us. His meaning was obvious enough, and without answering we started up the little crater's side, preceded and followed by the spider-men, who watched us closely. Looking back, I saw two of them gathering together and bringing with them the equipment and apparatus which lay on the ground.

"There goes our last chance to get back to our own world," I whispered to Rawlins, motioning toward these last two creatures and their burden, but he shook his head.

"We'll get back," he answered, in the same low tones. "And we're in this world, now, where we wanted to be."

I shared none of his confidence, in that moment, but was silent at an imperative gesture from our guards, and continued to climb on upward. This world, I reflected, could not be greatly different in size, at least, from my own, since the force of its gravity was to all appearances the same as that to which I was accus-

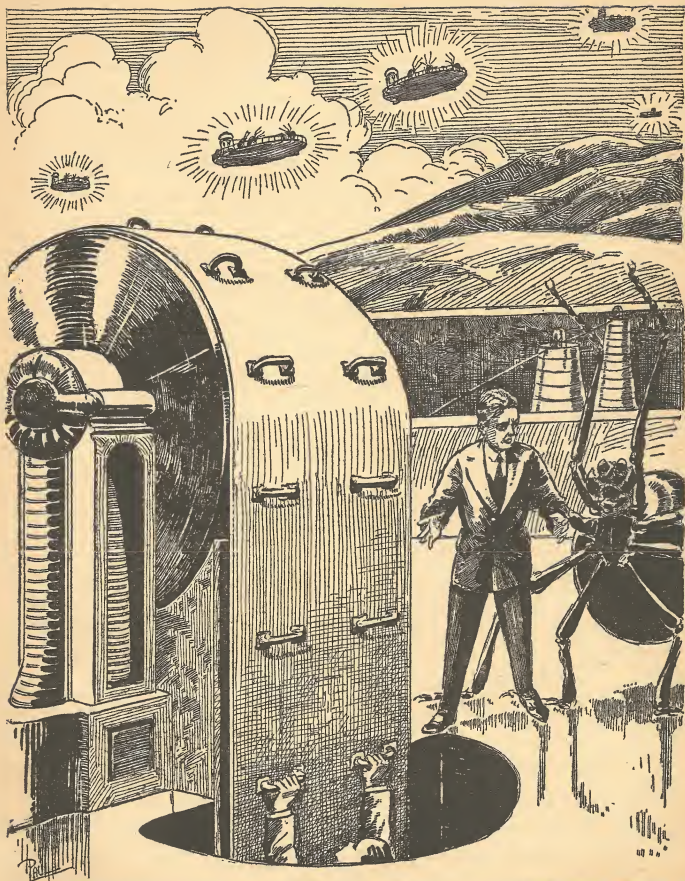
tomed in our world. Then I forgot all else as we reached the top of the little crater, where we paused gazing out over the strange vista that lay about us.

It was a barren vista, at first sight, a vast expanse of bare blue soil or earth that swept away to the horizons in great, rolling plains, with neither lake, river nor mountain in sight. Here and there upon it were what were almost its only signs of life, clumps of the same strange vegetation which we had observed in the crater, moving slowly about in search of sustenance from the barren soil, thrusting its multitudinous tendrils into that soil at times and pausing when it found the elements it sought. Except for these, though, the only feature of note in the landscape before us were three strange-looking objects which lay on the ground perhaps a hundred yards before us.

These seemed at first sight simply square black platforms of smooth metal, lying flat upon the ground, each having a low railing around its edges not more than a foot high. As I gazed at them, though, I saw that at a corner of each there rose a thick squat cylinder of metal, studded with shining switches. Toward these three platforms, each of which was some ten feet square, our guards motioned us, and as we reached them, we stepped over the low railing upon them, crouching down at their gestures of command. Rawlins and I and some seven or eight of the spider-creatures were upon one of the square platforms, a similar number of the things had taken their place upon another, while the remaining group did not accompany us but stood at a little distance watching us. On our own platform one of the spider-men stationed himself before the thick cylinder in its corner, and began to twist and press the studs upon its surface. A low purring sound rose from the platform's bottom, as he did so, and a moment later the whole flat metal surface rose smoothly into the air.

Straight up it rose, with smooth, effortless speed, until it hovered at a height of a thousand feet above the ground, the other platform rising close beside it. They hovered there a moment, then both swept away toward the north, flashing through the air with rapidly mounting speed, a great wind rising about us and beating upon us as we sped on. Glancing behind I saw the remaining group of spider-men, beside the other black platform on the ground far beneath, apparently watching us depart, and then they had passed from sight behind us and we were racing northward over the great barren blue plains, devoid of any feature of note, save only the occasional patches of moving vegetation and here and there a little bowl-shaped depression or crater like that in which we had been captured.

AS we sped on toward the north, I sought to discover the motive power of the strange vehicle which carried us, and from which came the low hum of power, which was the only sound of operation. I could only conclude that it was developed from forces unknown to us, but later I was to find that the principle of the flying squares was quite simple—it merely made use of the elementary laws of magnetic attraction and repulsion. This world of theirs, like our world, like any world, was a vast magnet, its two magnetic poles attracting unlike poles and repelling like poles. By the apparatus in the cylinder, the spider-men were able to make of the square platform a great magnet, so that it was attracted or repelled by either of the two magnetic poles of their world as they varied the nature of the magnetism with which the cylinder charged it. By skilfully controlling and changing that magnetic charge, they were able to raise the platform into the air and move it in all directions at will, so



I hesitated a moment, then grasped one of the holds on the band as it moved smoothly past me, and I was being swept downward into the darkness, Rawlins and the other guards following.

that the two platforms were now racing northward, pulled by all the magnetic attractive power of their world's north magnetic pole.

On and on we sped, high above the rolling blue plains, beneath the blazing bluish sun that now was slipping down toward the horizon from the zenith. At last our progress seemed to slacken slightly, and as I raised myself from the crouching position which we had assumed on the platform's floor, I could make out, far ahead of us, an outline of great black structures, that loomed against the skyline in the distance, which could only be a city of some sort. Toward them our two platforms were flashing on, their speed lessening with each moment, until at last they were within a mile of the city, moving ever more slowly down toward it.

It was indeed a city that I had seen, but a city of a strangeness unparalleled in the universe, I think, a city of cones, black gigantic cones which rose to a uniform height of a thousand feet or more throughout all the city, mighty cone-shaped structures set on their bases in even rows, ranks, streets, stretching away before us for mile upon staggering mile, into the distance, all of the same size, of the same height, the apex or point of each cut sharply across, truncated, to form a round platform some fifty feet across at the top of each. In scores, in hundreds, in thousands, they sat before us, surrounded by a vast black wall of the same height as they and of tremendous thickness, that stretched away on either side from the field of our vision, encompassing all the mighty city. Down toward the city, down toward this huge wall, swept our two flying platforms, and as we dropped closer I saw for the first time the true strangeness and wonder of the place.

For from the flat, truncated top of each of the giant cones, there led out to the tops of the surrounding cone-structures, slender, shining cables of metal, a vast and intricate network of shining threads of communication that led across all the mighty city, connecting cone to cone and cone to wall, as far as the eye could reach. And along those airy cables, along those dizzy ways, there swarmed the hordes of the spider-people, racing from cone to cone on those shining threads without thought of danger, swarming in ceaseless thousands a thousand feet and more above the ground, along those slender cables. These were the streets of this strange city!

While we gazed upon that scene in awe, our two platforms had been dropping down toward the great wall that encircled the city, and in a moment had landed gently upon the flat surface of the mighty rampart, where lay other platforms of the same kind. Now, at a motion of command from our captors, we stepped out, toward the wall's inner edge, where one of the slender, shining cables led from it out toward the nearest of the great cone-buildings. We shrank back as one person from that giddy pathway of the air, but before we could understand their intentions, we had each been grasped by one of the guards, who, holding us tightly in the grip of their two powerful arms, started off from the wall on the narrow cable, out over the city's floor a thousand feet below.

For the moment my heart pounded with fear as they bore us out along that airy way above the city, walking forward on that slender cable as easily as we might have done upon a sidewalk, their multiple limbs grasping it and holding it tightly. I held my breath, still rigid with fear, as they went on, but they seemed not to notice my agitation or that of Rawlins as they went forward. On they went, preceded and followed by our other guards, and in a moment they had reached the flat, round top of the nearest cone-structure, had crossed it, and were moving further in toward the city's center

on a similar shining cable. Past cone after cone they went, bearing us tirelessly forward, across the flat tops of the great cone-buildings and along the cables that connected them, meeting and overtaking and passing others of the spider-creatures on those cables, until at last there lay before us a great circular clear space, or plaza, at the city's center, and in the center of which stood a single great cone building of the same size as all the others.

Out from its top there radiated in all directions innumerable shining cables, connecting it with the buildings of the vast city around it, and now our guards bore us on along one of those cables, toward the central cone-structure's top. As we passed along the cable toward it, I glanced down for the first time, and saw that the spaces on the ground between the great cones were all but deserted, smoothly paved with metal, and that the aerial cables seemed to be almost the sole avenues in use in this strange city. Then we had reached the central building's top, from which scores of the spider-creatures were constantly leaving and on which other scores were as ceaselessly arriving, by the cables. Now, as our guards set us down, we saw before us, at the center of the building's flat, round top, a curious mechanism, whose like I had glimpsed on the building-tops, over which we had already passed, but whose purpose I saw now for the first time.

THE thing was like a great endless belt that rose out of a round black opening near the center of the round flat summit of the great cone, and that moved across that summit for a few feet and then disappeared down into a similar opening at that distance from the first. It was like a broad band of gleaming metal, flexible and endless, that moved smoothly and ceaselessly up out of the one opening, and down into the other, and set along the broad belt's length at every few feet were small curved metal staples, or holds. As we watched, we saw one of the spider-creatures rising out of the opening to our right, clinging to one of the hooks set in it. As the belt bore him upward to the level of the floor on which we stood, he released his hold and stepped out upon that floor, and a moment later was hurrying away from the building on one of the cables behind us. Others of the spider-creatures were ascending and descending by the same method, we saw, making use of this endlessly-moving belt which was apparently the only type of lift or elevator used by the spider-men in their great buildings. And now our own guards motioned us toward the left-hand opening, into which the endless band descended.

One of them gripped it as it swept past him and a moment later was being carried downward into the darkness of the shaft, motioning with his ray-rod for me to do the same. I hesitated a moment, then grasped one of the holds on the band as it moved smoothly past me, and I too was being swept downward into the darkness, Rawlins and the other guards following me. A moment later the darkness of the shaft gave way to light, as the belt to which I clung shot down into a long, great corridor, into the floor of which the belt vanished through an aperture like that above, while a few feet from it a similar aperture permitted the ascending side of the endless band to rise upward. As he reached the level of the corridor's floor, the guard below me stepped out upon it, and I followed his action. A moment later Rawlins and the other guards were at our side, and we were marched down the long corridor which turned abruptly into a doorway some distance down its length.

We found ourselves in a big room, lit up by high openings in its walls, through which there poured the

light of the sinking white sun outside. Shelves and tables littered with scientific apparatus of all sorts filled the room, which had the appearance of a laboratory, while at a desk or bench across the room from us, four figures were standing, intently examining some instrument before them. They turned as we were marched in by our guards, and we saw that three of them were spider-men like our captors, hideous, many-limbed black figures. But it was the fourth figure that held our attention, we stared at him in utter amazement. A human figure! We gasped at the sight of him. It was Adams!

Stunned with surprise, we stood there, gazing at him, while he in turn regarded us with smoldering eyes. To encounter him here, in this strange city of the spider-people, was the last thing we had expected, though it was in search of him that we had come to this strange world. Then, as we gazed, Adams came forward toward us, his burning eyes fixed upon our own.

"So you came after me, Rawlins, into this interlocking world," he said, his voice low but charged with deadly menace. "I thought that perhaps you would—I thought that some might find the apparatus by which I came through to this world, and might dare to follow me, so I gave orders that the spot where I came through be watched. That is why you arrived in the hands of my watchers. You come in time, Rawlins," he went on, his voice suddenly shrill, mad. "I have needed here the help of someone who could understand me perfectly, who could follow my orders in all I have set out to do here, in all that I am doing!"

Rawlins found his voice. "Adams!" he exclaimed. "I came after you because I, at least, know what you are doing, know that already you have made three transpositions of matter from our world to this one, and from this to that."

The mad scientist before him laughed gratingly. "You know that, Rawlins?" he asked. "Then you must know all the rest. Must know that those three transpositions I have already made were but tiny tests. You must know that within days now, when I have completed my work, with your help, it is not mere bits of barren land that I will transpose into that world of yours, that world that derided me. I will transpose cities, the scores of mighty cities of these spider-men, who are weary of this world and to whom I have promised to give the world of man, in exchange for this world, to conquer and destroy and hold it forever. And that is the proof which I shall give to the world that demanded proof!"

He laughed wildly as he finished, and now, as I realized the tremendous horror that loomed above our world, I felt the blood driving from my heart. Rawlins' face had gone dead-white as he listened and now, with a hoarse shout, I saw him leap straight forward toward Adams! I too shouted and sprang to his side, but before I could reach or stay him, the ray-rods of the guards behind us had sprung up and a half-dozen shafts of the brilliant deadly ray were flashing toward us!

### CHAPTER III.

THE moment that followed was to me only a split-second, lightning-like whirl of swift action. At the moment that the deadly orange rays had been released upon us, we had both been leaping forward, and it was that fact alone which saved us, because as we leapt, the brilliant rays grazed past just behind us. Before they could loose the rays again, the spider-men beside Adams had sprung forward and gripped us with their powerful arms, swaying with us there for a moment, and then forcing us back once more, holding us tightly.

Adams came toward us again, his black eyes flaming with the same deadly light. He uttered a series of swift commands in the shrill, vibrant speech of the spider-people, and then spoke to us.

"You will stay here, Rawlins," he said, quietly, "to give me your help when I need it. A little persuasion possibly of a painful sort, will overcome all your scruples, I think. As for Harker, the spider-men can have him. I believe that they have a very interesting method of disposing of their prisoners."

He uttered another shrill, short order, and in answer the guards about us jerked us back to the room's door, back into the long, high corridor. There we were separated, Rawlins being conducted farther down the corridor while two of the spider-guards returned with me along the way we had come. Glancing back, I saw Rawlins' guards halt him farther down the long hall, saw one of them press a stud in it which caused an opening in the wall to appear instantly, a narrow, perpendicular slit that widened swiftly until it was a full-sized door. Through this opening Rawlins was thrust, with a last wave of his hand to me. As the door closed again, I turned back to my own predicament, and found that my two guards had halted me before the ascending side of the endlessly moving belt on which we had descended.

A moment later saw three of us moving smoothly upward on the belt, holding to hooks along its length, and when we had stepped out upon the top of the great cone-building, I saw that darkness was falling upon this giant city of cones, for away to my left, the dazzling white sun was sinking below the horizon. Far below, on the smooth metal paving between the great cones, numbers of the spider-people were moving slowly about, while the traffic on the myriad cables about us seemed to have lessened somewhat. I noticed now, too, what I had failed to observe on my arrival. On the top of this central cone, toward one edge, was gathered a mass of familiar-looking apparatus, very like that which had actuated the transposition machine on which we had come to this interlocking world. Before I could speculate on its presence there, however, one of my guards had grasped me and was moving out upon one of the slender cables that radiated from this central building.

As he moved on I noticed that though the thickening twilight was descending upon the city, great globes of light were shining out, big spheres of shining white light suspended here and there above the tops of the cone-buildings, while other floods of the same white light poured out through the narrow window-openings of those buildings. That illumination was very like the light of the sunken white sun. It was, in fact, as I learned later, sunlight, caught and held during the daytime and released at night. Theoretically, even in my own world, I knew, it would be possible to catch a ray of sunlight between two mirrors, for instance, and keep it reflecting from one to the other indefinitely until it was released. In practise, of course, the imperfections of the mirrors would defeat such a plan. But the spider-men had devised a means by which the vibrations of their sunlight, caught during the day by great light-traps, or lens affairs, were kept stored in a state of unceasing vibration until it was desired to release them as common light once more.

Across all the mighty city, reaching away into the distance on every side, there shone these great white globes of light, but for all their illumination and that which poured from the myriad windows of the great cones, the cables above the city lay in near darkness. Over them, the spider-people still moved unhesitatingly, and now I saw that the guard who was carrying me was reaching the end of the cable, which led from

the central cone to one of the circle of cones that lay at the edge of the round plaza in which the central building stood. At last we were upon the top of the building at the cable's end, and as I was set down there by my guard I saw, that, unlike any other of the buildings I had seen in the city, there were upon this building's top a dozen or more of spider-guards, armed with ray-rods, who challenged us in shrill tones as we reached the building's top.

My own two guards answered briefly, and the others stepped aside and allowed us to make our way to the endless belt, which was the one means of ascent and descent in all these buildings. Already I had guessed from the presence of the guards at its top that this building was a prison, and my guess was verified, when after descending half-way down into the building's interior on the great belt, down past a dozen or more levels, we stepped from it upon the floor of another corridor, which, like the others we had come down through on the belt, was patrolled ceaselessly by a half-dozen of the spider-guards. To these again my two captors made brief explanations, then stepped to the smooth wall of the corridor, touched a stud there, and as a narrow, vertical slit appeared in the wall and widened to form a doorway, motioned me through it with their deadly rods.

I stepped inside, slowly and hopelessly enough, and instantly the door began to close behind me, narrowing to a slit and finally disappearing, until only the blank wall was visible. However that strange door was operated, it was as perfect a one for a prison-cell as could well be devised. I turned from it, however, to the interior of my prison, which I found was a small, square room whose only visible opening was a narrow, barred window in the wall opposite me. Through that window there filtered into the dark little room, a feeble white light from the myriad globes of the city outside, and now, by that dim light, I saw that there was another in the room with me, a dark, erect figure, who was coming forward toward me.

For the moment, as it came toward me, I had a wild hope that it was a man like myself who was prisoned here with me, so erect and man-like was that shape as seen in the little room's dim light. But as it came nearer, I shrank back in sudden fear, for this was no man, for all its man-like shape. The erect white body, the two legs or supporting limbs and the two strong upper arms, these were human-seeming enough, but there the resemblance ceased. For though the skin was dull white in color, it was hard and grained in appearance; the arms and the legs both ended in great, three-clawed talons; while the head of the creature, set squarely upon its shoulders, was oddly bird-like, with two small, intelligent dark eyes, a hooked owl-beak between them, which was mouth and nose combined as in any bird, and a thick crest of short white feathers upon the head in place of hair. The only clothing of the creature was a number of leather straps, or belts, about its body. All the fear and awe with which I had first beheld the spider-men returned to me at sight of this strange creature, as it came straight across the cell toward me!

I STOOD silent, hardly breathing, as it came on, I thinking for the moment that I had been thrown by the spider-men to the mercy of some strange beast. Then the creature stopped, a sudden curving of muscles wrinkled its face into a grotesque smile, and it spoke to me in deep, guttural tones that were wholly out of place with its bird-like appearance. It was apparently repeating words to me in some unknown language, and as my fear of the thing lessened a little, I smiled in

turn. To show that I, too, was an intelligent being, I addressed the creature in my own tongue.

He shook his head, after a moment's thought, pointed to himself, and repeated a few syllables over and over again, still pointing to himself. "Nor-Kan" was what he seemed to be saying, pointing always to himself, and finally I began to understand that he was naming himself, so I in turn pointed to him and repeated the words, at which the grotesque smile re-appeared on his face. Then I followed out the same procedure with myself, pointing to myself and repeating my own name, and within a few moments Nor-Kan, as I had begun to call him, began to understand. Forgetting my own captivity and the enigmatic fate which awaited me, in the interest of this strange creature, I went on in this manner with him through the hours of that night, and by dawn I was still sitting with him in a corner of a little room, learning the words of his strange language by the simple process of having him point to some object, or perform some action, and then repeat for my benefit the corresponding word or words.

With dawn came one of the spider-creatures, opening the door of our cell a few inches and thrusting in a handful of small brown pellets which my companion indicated was food. They were almost tasteless in eating, yet I discovered that they had an extraordinary satisfying power not only for hunger, but thirst as well. Our scanty meal over, I stretched myself on the floor and slept for hours, a sleep broken by nightmares, yet far from the horrible actualities about me. When I awoke, darkness was again settling upon the city outside, and I found my strange companion quietly sitting across the cell and regarding me.

Soon we began our former task of exchanging words and ideas, and within a few hours I had progressed so far in manipulation of the strange gutturals, that we were able to converse in a crude and broken fashion. I pass over the many ludicrous mistakes which I made in the course of our speech, for in spite of these, our progress continued, and by the end of that night I found myself with a rough idea of the situation in this weird interlocking world into which Rawlins and I had come.

Nor-Kan, I found, was of a race totally different from the spider-men, and sharing with them this strange world, the two races being deadly enemies. Ages ago, I learned, the race of Nor-Kan had risen to the position of dominance over this world, as the most intelligent creatures upon it. They had not developed from the mammal races, as did man in our world, but from the bird-races, and though they were still, like Nor-Kan, somewhat bird-like in appearance, they were in reality as far removed from the feathered races from which they had sprung, as man is removed from the great ape-races that were his own progenitors. This race of bird-people had developed a civilization as great as, and greater than, that of man, and over all this world their own cities had stood, while over all other creatures upon it their domination had been established.

Gradually, though, with the increase of their science and their power, the bird-people had softened somewhat, as conquering races will do, and their peoples had less and less desire to perform the various labors of their world. Much of these, it was true, were done by machinery, but much there was that needed directing intelligence, and this was a work for which few of them had any liking whatever. Pressed by the desire of all their peoples, the bird-races' scientists strove to solve the problem set before them, and finally did achieve a solution, which was greatly applauded by the bird-races but which, unknown to them, held within it the seed of their own downfall.

There was among the other creatures of this world a race of spiders, or spider-like creatures, larger than any spiders of earth, but no higher in consciousness and intelligence, and it was in these that the scientists of the bird-races found the solution to their problem. They took individuals of these spider-races and began to alter their very being, changing the nerves and gland-organs in their bodies subtly to make their bodies grow to great sizes, breeding them scientifically one with the other, always with greater intelligence as their goal, and continuing this process onward and onward, until they had developed from these spider-races great spider-creatures, whom they had furnished with powerful arms, and enough intelligence to receive and execute the orders of the bird-people, who could control and direct the machinery of the bird-people without needing their supervision.

Thus were the bird-peoples freed from a great part of their labor, which was now performed by the semi-intelligent spider-men. As time went on, too, these spider-men constantly increased in intelligence under their masters, so that they could take over a greater and greater share of the work of the latter, since it was necessary to increase their mental capacity to ever-greater amounts, in order that they could comprehend and execute the increasingly complicated work, which they were now called upon to do. Through the centuries, this process went on, and the result of such a state of affairs might well have been foreseen. There came a day when the spider-servants had attained as much intelligence and science as their masters, whom they greatly outnumbered, and in that day they rose as one and turned upon those masters.

Then there had been flaming revolt and war across all this world, the mighty hordes of the spider-men rising against their masters until but comparatively few of the bird-races were left. These few, some tens of thousands in number, the spider-men had driven steadily back, southward, away from their cities, until only a realm of a few hundred miles about the southern pole remained to the bird-races. There they made their last stand against the spider-men, building their cities there and erecting great barriers around them, while the spider-men, for all their power, could not pass. And in their realm of the southern pole, as habitable beneath the blazing sun as any other portion of the world, the bird-races had stayed, a remnant of their former might, while the spider-men held all the rest of this world, rearing upon it their own strange cities. More than once though, in the centuries that had passed since, Nor-Kan informed me, the spider-men had made attempts to break through the barriers of the bird-races and destroy them, while raiding-parties of the bird-peoples, in turn, still flashed northward occasionally to strike a blow at their ancient enemies. It was on such a raid that he had been captured, he told me, having been forced to the ground near one of the spider-cities, as he returned with others from a raid, by a defect in the mechanism of his air-boat. The air-boats of the bird-races, he explained, were wholly different from the flying-platforms of the spider-men; being torpedo-like in shape, lifted and flung through the air by a mechanism which cast around them a sheath of invisible vibrations, which were impenetrable to all gravitational force, and by altering which, the craft could be sent at great speed in any direction. He had just repaired the mechanism of his own, he said, when a patrol of the spider-men had pounced upon him and brought him as a prisoner to their city.

"And you've made no effort to escape?" I asked him.

He smiled that grotesque smile. "How?" he asked hopelessly, throwing an arm out toward the solid walls

around us, the barred, narrow window. "Even if one could, in some way, open the door of our cell, the corridors outside are constantly patrolled by guards. Even if one got through those corridors and up to the building's top, he would find only more guards there. And if by some miracle one could overcome those guards also, what then? He would still be in the heart of the spider-city, with only those cables leading outward over it, cables and building-tops swarming with the hordes of the spider-men. It is hopeless to try."

I SHOOK my head in stubborn denial, and turned to examine our cell more closely. To escape by its door was obviously impossible, for it was opened only by the stud outside, and presented to us only a blank surface. And as I examined the window, it seemed that it too was hopeless, obstructed as it was by two thick metal bars which were set firmly in the wall at top and bottom. The window itself, as I could see, was, like our cell, half-way up the side of the great cone-building, more than five hundred feet from either the metal paving below or the building's top. To escape through the city below was wholly impossible, I knew. Our only chance was to gain the building's top and somehow make our way to the near-by buildings, where Nor-Kan told me that he had seen his air-boat stored. It seemed a madman's scheme to attempt to reach our prison's top, but as I gazed out and saw that at intervals of six feet or more a narrow band or molding encircled the cone-shaped building, I began to see how an escape might be made, wild as the attempt would be.

Swiftly I outlined my scheme to Nor-Kan, and though he shook his head as I unfolded it to him, his eyes were snapping with excitement. When I had finished, he admitted that he might as well perish in making the attempt as wait for the torturing end, which the prisoners of the spider-men inevitably meet with in their laboratories. If we gained the top of our prison, we agreed, he was to make an effort to reach and steal his air-boat from the near-by cone-top where it was stored, while I was to venture back toward the central building where Rawlins had been imprisoned and attempt to free him, awaiting Nor-Kan on that building's top. The whole scheme seemed as mad a one as could possibly be devised, but it was at the same time our one chance for life and liberty. We began to work upon it at once, turning our attention toward the window-bars which obstructed that opening.

To sever those bars was the thing upon which all our scheme rested. Luckily we had a crude means of doing so. Though Nor-Kan had been stripped of all his possessions, just as I had been, his captors had overlooked the heavy metal buckles of the leather harness, being attracted by the weapons which he wore. These buckles were long, with finely serrated edges of hard metal, crude little miniature saws, in fact, made so as to make more secure the weapons and tools which were sometime hung upon them. In a moment we had disengaged two of the buckles, and with their edges had set to work upon the bars, at their bases. Dawn was breaking again upon the city outside, and we ceased our work until the door had opened and our strange food had been thrust in. Then we turned again to the bars and sawed furiously at the thick metal.

Through all of that day we worked on at the two thick bars, stopping only now and then for a moment of rest, and when darkness came again had almost severed them. A few more hours of work followed, work which we could carry on only by the faint light that fell upon us from the great radiant white globes scattered here and there across the city, and then at last we had cut through both the bars. That done it was but the work of a few minutes, exerting all our strength

on each bar in turn, to bend them inward and to one side. Then I leaped upon the sill of the narrow opening, and sat for a moment straddling it, gazing cautiously out over the scene before me.

Before me lay the great panorama of the city of the spider-men, a forest of dark, gigantic cones whose openings gleamed with white light. To my right lay the circular clearing at the city's center where stood the single cone that was the prison of Rawlins, and looking up I saw that only a few spider-creatures, here and there, were moving over the many cables. Beneath me the slanting wall of the great cone dropped downward at a sharp angle toward the metal paving below, upon which there moved a few of the spider-men, though for the most part they seemed to retire within their great buildings at the coming of night. I glanced downward, then upward where the great wall slanted sharply up above me, and then gently swung myself out of the narrow window until my feet were resting precariously upon the narrow band or molding just below the window, one of the similar bands, either ornamental or to increase the structure's strength, which encircled it at intervals of six feet or more from its base to its truncated tip.

The molding was not more than an inch in thickness, and for an agonizing moment while I teetered upon it, I was reaching upward toward the next band above it. As my hands finally gripped that band, Nor-Kan was emerging from the window beside me, and a moment later I felt his powerful arms pushing me slowly up the steeply slanting side of the great building, up until my feet were resting upon the narrow band which my hands had clutched a moment before. Then, grasping one of the straps about his body, I slowly pulled him up beside me, and in another moment we clung together to the narrow foothold. And then I was reaching upward again toward the encircling band above us.

THE time that followed, while we crawled in this way up the side of the mighty building like two strange insects, was, I think, the most agonizing in all my life. Upward we went, from band to band, clinging with all our strength to our inch-wide foot- and hand-holes, pushing and pulling each other in turn up the side of the gigantic cone, avoiding all the openings in its side as we clambered slowly upward. We were within a hundred feet of the great cone's top, and hopes of success were beginning to rise within me, when suddenly, as I stooped slightly to pull Nor-Kan up to the narrow band on which I was standing, my feet seemed to slip beneath me upon that band, and instantly I was reeling downward!

Had the building's sides been vertical, nothing could have saved me from a hideous death on the metal paving hundreds of feet below, but the steep slope of the great cone's sides saved me. For before I had fallen a half-dozen feet I was scraping along the steeply slanting side in my fall, and as I did so my hands caught, automatically and entirely without conscious thought, upon one of the narrow bands up which we had come. The narrow band was no more than enough to give a hold to my finger-tips, and for a moment I clung there with all the energy of despair. I felt my hold giving, as I swung gently to and fro, felt my cramped fingers straightening, slipping, and then as they gave up their holds nervlessly, my hands were gripped by strong talons from above, and within another moment Nor-Kan had pulled me up beside him.

For minutes we clung there without moving, lying inward against the slant of the great building, while I regained my breath, and overcame the violent trembling that had seized me, and then we took up our climb

again. Still up and up we went, from band to band, until at last we were within a few yards of the cone's flat, round top. There came down to us through the darkness from that top, the sound of shrill, high voices, and the occasional sound of shuffling limbs, so that we knew the guards were there and watchful. Slowly, stealthily, we made our way upward, and finally had reached the last of the encircling bands. Standing upon it, we could raise our eyes cautiously above the level of the building's top.

Upon it, we saw now, were about a dozen of the spider-men, all armed with the deadly ray-rods, conversing desultorily amongst themselves, while one or two moved restlessly about. The white globes of light suspended here and there above the city, shed a clear light upon the scene, and we saw that it was madness to show ourselves upon the great cone's top. Just above us, though, within our reach, there stretched the shining, slender cables that led from the cone's top out to the near-by buildings, and it was to reach these that we had risked our lives in our great climb up the building's side. Silently, still clinging to the upmost band, we began to move around the building.

On we went, with slow, stealthy progress, but before we had gone a dozen feet one of the buckles of Nor-Kan's straps flapped inward and clanked with a metallic sound against the building's wall. At once we flattened ourselves against that wall, praying that the sound was not heard, but even as we did so, there came the sound of shuffling feet or limbs as one of the spider-guards above crossed the round platform toward the edge where we crouched. Were we discovered, a single push would send us both down to a fearful death a thousand feet below, we knew, and we held our breath as the shuffling steps came closer.

The creature could hardly have been more than a few feet from the edge just above us when from one of the other spider-men on the building's top came a shrill call. The guard who had been moving toward us to investigate paused, and after a tense moment, retraced his steps towards the others of the group, where we heard him joining in their conversation. We drew long breaths, and then started on, around the edge of the great building's top toward the cables we sought.

In a moment more I had reached the cable which led out toward the top of the cone in the central clearing, and as I paused there, Nor-Kan crept on and then he too paused beside another of the cables, indicating to me that it was the one he had sought. Then, gripping it with his strong taloned hands, he started to swing himself along its length through the darkness. In a moment more he had disappeared into that darkness, and summoning all my resolution, I grasped the slender cable just above me with my own hands, and with a silent motion swung myself from my precarious position on the building's side out into empty space, hanging from the cable with more than a thousand feet of empty air between myself and the hard metal surface far below.

Hand over hand, outward I swung along the slender cable, out into the darkness toward the top of the central cone, hundreds of yards away. At any moment I expected a shrill cry from the guards on the roof behind me to herald my discovery, but the shrouding darkness hid me from their eyes, and as I swung on, I felt a rising hope that I might yet succeed. Far below I could glimpse the metal paving, glinting dully in the light of the white globes of light throughout the great city; I could glimpse upon it a few of the spider-creatures moving from building to building, while here and there on the myriad cables about me I half caught sight of other dark spider-shapes moving along those shining threads.

On and on I swung, until I had crossed half the gulf that lay between the two great buildings, but by then I felt such overpowering fatigue in my arm muscles that, for a few moments, I swung from the cable by my knees to give my arms a slight rest. Then, reaching up again, I swung on my way once more, hand after hand, but before I had gone a dozen feet farther I stopped abruptly and hung motionless. From ahead of me, along the cable, came a slight scurrying sound that chilled my blood. For as I hung there I saw the figure of a spider-man coming toward me, out of the darkness. On he came along the cable, suddenly saw me hanging there, a thousand feet in mid-air, and as he did so, he stopped short, and gazed at me. Then he uttered a shrill cry, seemed to gather himself, and was leaping forward along the cable, straight toward me!

#### CHAPTER IV.

I THINK now that the paralysis of fear that gripped me could have lasted for only the briefest possible moment, but at the time it seemed eternities to me as I watched that dark, hideous shape flashing along the cable toward me as I hung helplessly. Before it could reach me, though, enough of my presence of mind had returned to me and I swiftly swung up, and buckled my knees again about the cable, just as the creature grasped me by the body, clinging to the cable with its own multiple limbs, while I in turn strove for a hold on the hideous bulbous mass that was both its head and body.

In a moment I had grasped it, and then, locked in a death-grip, we swung there on the slender cable, struggling silently in the shrouding darkness, far above the ground. In utter, deadly stillness we swung and twisted there, while all about and below us the white-lit openings of the great cones and the radiant globes above them gleamed through the darkness like great white eyes staring at us. Exhausted as I was, though, I knew I was no match in strength for the creature with whom I struggled, and at last I felt myself being slowly lifted up by his powerful arms, away from my desperate hold upon the cable.

Up I was lifted, up and sidewise, until I felt the last of my grasp on the cable going, and knew that a moment more would see me hurled down to death below. Nothing could save me, I knew, and at the thought such a mad despair and fury surged through me, that, filled with a wild resolve to take my opponent with me to death, at least, I suddenly released my last hold on the cable and threw myself bodily upon him.

It was the last thing that he had expected me to do, this sudden mad attack on my part, and it took him so by surprise, that before he could make certain of his own grip on the slender cable, my leaping rush had knocked him sidewise from it. He tottered, swayed, and then with a thin scream fell abruptly and whirled downward into the darkness. For the moment I thought that I too was tottering to my doom, but as I had thrown myself upon my enemy, my elbows had caught on the cable, sustaining me for an instant while he fell, and in the next moment I had reached up and was again hanging from it with my knees, shuddering violently. Hanging there, head downward, I could make out on the metal street far below a black little blotch that I knew was the body of my opponent, but as the ways below were all but deserted, it was my hope that it would not be discovered for minutes, at least.

I knew, though, that my time was short, and in a moment reached up again, and swung on along the cable's length toward the central cone, hand over hand, along that airy pathway, until within a few more min-

utes I had reached the top of the central cone and was scrambling upon it, breathing a sigh of relief to find it for the moment deserted. On one side of it, was the mass of apparatus I had noticed before, around which a low metal railing had been constructed, and my heart leaped as I saw that the apparatus was in reality a partially-constructed duplicate of the one which had propelled us into this strange interlocking world. The coils and generators and switches were of the same sort, I noticed, but all were far larger in size, and instead of the two big metal disks of our machine, there was, what appeared to be a metal globe, or world-map, different points of which, movable pointers attached to the intricate masses of apparatus were touching. The whole affair seemed incomplete, as yet, and before its full significance could strike me, I had leaped on toward the endlessly ascending and descending belt, and in another moment was being carried downward by that belt into the interior of the mighty building.

Down it swept me, into the darkness, and then into light, the same long and shadowy corridor where my guards had halted me on my former visit there. As I reached the floor of that corridor, which seemed quite silent and deserted, I sprang quietly off the belt, and then crept forward toward the open door of the laboratory in which Adams had confronted us, and from which a stronger white light was pouring out into the more dimly lit hall. I could hear voices from the inside of that laboratory, high, shrill and vibrant voices, and cautiously I crept to its doorway and peered inside.

In it were Adams and two of the spider-men, busy now about a smaller piece of apparatus similar to those I had seen on the building's top. As they worked upon it they conversed in their odd, high tones. Quietly I waited there, until they had turned for a moment from the direction of the door, and then slipped silently past it, and hurried on down the long corridor, pausing before the section of the wall through which I had seen Rawlins thrust. After a moment's feeling in the shadows, I found the stud on the wall and pressed it. Instantly a narrow slit appeared in the wall, widening into a doorway, and as I stepped into the little room beyond it, there was a rustle as its occupant rose to meet me. It was Rawlins, his face wandering in the dim light, and when he saw my own, he uttered a low exclamation that I silenced with an upraised warning hand.

"Harker!" he whispered. "How did you get here—" "Quiet, Rawlins," I told him. "We've got a chance to get free if we can get to the building's top." And briefly I whispered to him of the plan of Nor-Kan to meet us there with his air-boat if he could manage to steal it.

He nodded quickly, his eyes afire, and then motioned me ahead. Once out of the room we set off down the corridor, as silently as possible. In a moment we had reached the edge of the laboratory door, from inside of which there came the shrill voices of Adams and the spider-men. I turned; was about to motion to Rawlins to make a leap with me across the door, when the voices inside came abruptly nearer, and within another instant the three were emerging from the laboratory into the corridor!

BEFORE we could think of retreating down the hall, they were outside, and we had time only to throw ourselves backward to the floor into the shadows, and crouch there in silent prayer that we might not be seen. As we did so, the three had come out of the door, the two spider-men starting off down the corridor in an opposite direction to ours, while Adams, after calling something after them in his harsh, shrill tones,

moved back into the white-lit laboratory. In a moment more the two spider-men had disappeared from view around a bend in the corridor, and we breathed heart-felt sighs of relief. I motioned to Rawlins to proceed toward the belt-stairway now, but he held me back, his face suddenly alight with excitement.

"Adams is alone, in there," he whispered tensely. "It's a chance in a thousand for us to get him, take him as a prisoner with us!"

My heart quickened uncontrollably at the suggestion, but I saw the force of it. With Adams our prisoner, we could halt the completion of his deadly work, could prevent the catastrophe that loomed for our world. "We'll try it," I whispered, "but if he sees us and cries out before we get him, it's all up with us."

Now we crept to the doorway, gazed inside. Adams had returned to the long desk and was again examining the apparatus upon it on which he had been working. His back was turned toward us, and silently we crept into the room, moving forward inch by inch, drawing nearer him like wild beasts stalking their kill. Inch by inch we moved on, silently, stealthily, until at last we were within a few feet of him, were moving forward upon him with upraised hands. And then, warned by some strange instinct, he suddenly turned full toward us!

His eyes widened as he saw us, and then, even in the instant that we gathered ourselves for a spring upon him, he had given utterance to a high, shrill cry, a vibrant call that echoed through the great building's corridors and halls and was taken up and repeated by scores of other voices. Even at the moment that he cried out Adams had whirled to one side with astounding quickness, was springing out of the door and down the long corridor, and as we leaped after him, Rawlins turned to me, his face livid.

"No chance now!" he cried. "The building's top's our last chance!"

Toward the great ascending and descending belt we ran, while farther down the corridor we saw Adams racing on, a babel of shrill cries loosed throughout the building now in answer to his calls. We reached the ascending side of the belt, grasped the hooks in it, and as we were carried smoothly upward, we saw Adams turning, and with a crowd of the spider-men aroused by his cries, he came running down the corridor toward us. Then they passed from our sight as we were carried on up into the darkness and then into the light again as we came out upon the flat, round top of the great cone-building. It was quite clearly lighted by one of the near-by radiant white globes, and I saw at once that there was no sight of Nor-Kan or his air-boat upon it. He had failed, and our last chance was gone with him!

The despair and bitterness of approaching death settled upon me, as I felt that our fate was sealed, but now I heard a cry from Rawlins, saw him leap to the little metal railing that surrounded the apparatus beside us, saw him tear a section of that railing away by main force, a long metal bar, with which he leapt toward the ascending belt up which we had just come. Even as he did so, one of the spider-creatures, a ray-rod in his grasp, aimed toward us, appeared on that belt. Before he could release its deadly force, Rawlins' heavy metal bar had crashed down upon him and sent him reeling back down into the shaft in a crushed, limp mass.

I tore a bar from the railing for myself and leaping to Rawlins' side, saw a half-dozen of the spider-creatures ascending in a close group, clinging to the endlessly-moving belt. Their brilliant orange rays shot up toward us as they were carried upward but we had stepped back and they could not reach us with the ray

from the interior of the shaft. The next moment they had been carried up to its mouth, and then, before they could again release the rays, our two bars had smashed down as one and they too were tumbling downward in a shattered mass of dead and dying. Still they continued to whirl up toward us on the great belt, singly, in groups, in masses.

The moments that followed were moments of madness. Up and downward our great clubs were whirling, smashing through the bulbous bodies as though through egg-shells, sending them down into the shaft in masses of shattered dead, while all about us, it seemed, there hissed and flashed the brilliant orange molecular rays with which the spider-men strove in vain to reach us from the shaft. We heard Adams' voice, urging them on from beneath, but they needed no urging for the belt carried them endlessly up toward us. Such a battle could not last for long, I knew, even while I whirled and struck, for now the city was aroused all around us; shrill cries and alarms were spreading across it, new white lights were flashing into sudden being.

By those lights I could glimpse, all across the city, it seemed, scores of the spider-creatures leaping toward us along the shining cables, racing across those airy ways above the city toward the top of our central cone. A moment more and they would be upon us, a moment more and their deadly rays would stab forth to annihilate us, I knew. But even at that moment there came a hoarse cry from beside me, and I saw that one of the spider-men on the ascending belt had managed to snatch the end of Rawlins' bar as he struck, had torn it from his grasp and struck him back a blow that sent him to his knees at my side. Before the spider-man could strike again, my own bar crashed down upon him, and I stooped to my friend's side, half-raised him to his feet. Now, amid a wild babel of fierce, shrill cries, the hordes from below were sweeping up toward us on the belt unopposed, Adams at their head, while the other hordes upon the cables were racing along the last few yards of their length toward our building top. From beneath, from all about us, the dark spider-hordes rushed upon us, as I half-raised Rawlins to his feet. It was the end, I knew.

Then suddenly a dark, long shape seemed to swoop down out of the upper darkness into the white light at the great cone's top, a strange, long shape upon which I glimpsed a dark figure, a grotesque and bird-like figure, at sight of which I shouted aloud.

"Nor-Kan!" I screamed, and even as I did so, I saw his long air-boat drive down beside us, felt his strong grasp pulling us up beside him. Then, as a score of brilliant rays leapt toward us from the spider-men on the cables and those pouring up on the great belt, the air-boat soared sharply up with immense speed, clear of the deadly rays, and in a moment the wild maelée on the building-top beneath had dwindled and died in our ears as we flashed upward and outward into the night.

Now, as the long, torpedo-shaped little air-boat soared over the great cone-city of the spider-men, its white globes of light beaconing the darkness beneath us, I turned to Rawlins, and found that save for a slight stunning, he had been unhurt by the blow that had felled him. I turned to Nor-Kan, who was at the controls beside me, and returned the smile with which he greeted me.

"You came just in time," I told him. "I thought it was all up with us—that you'd failed to get to your air-boat."

"It was a close thing," he said, "but I managed to get to it." And then he told us, (I interpreted for Rawlins) how he had swung along the cables after leaving me, toward the cone-top where his air-boat lay, making his way to it as I had done, but without my

misadventure and combat in mid-air. He had been forced to hang from the edge of the building for many minutes, he told me, before a chance turning away of the spider-guards on its top had given him a chance to spring up and leap into his air-boat, slanting up into the darkness before the surprised guards could prevent him, and swooping down upon the cone-top where we battled, just in time to save us.

WHILE we talked, the little air-boat had been driving toward the south at immense speed, and minutes before the last lights of the great city of cones had vanished in the darkness behind us. Now a pale light was welling up from the horizon at our right, the white light of dawn. As it intensified swiftly we saw that our air-boat was driving southward high above the rolling blue plains, with none of the spider-men or their cities now in sight. As the light increased, though, Nor-Kan turned for a moment from the little craft's controls, gazing anxiously backward.

"You think they're following?" I asked, and he nodded slowly.

"None of their flying-platforms are swifter than this air-boat," he said, "but the city from which we escaped will flash word to all their southernmost cities, on a light-beam system of communication which they have, to watch for us and cut us off as we make for the south. Our only chance is to get to the south-polar realm of my people and inside its barrier before the flying platforms can find us."

With these words he turned back to the air-boat's controls, and we kept a tense and constant watch upon the surrounding horizons as hour after hour the little craft flew south. Nor-Kan, as he told us, was increasing the distance of our flight by taking a zig-zagging course to avoid the cities of the spider-men which lay about us, so that, while we drove southward, the blue-white sun mounted to the zenith, and then was declining again. Far beneath us the surface of this weird world slipped by, the great blue barren plains, the occasional depressions or hillocks that varied their appearance, the great masses of azure vegetation which moved slowly and restlessly about beneath us, browsing here and there. Some of the time I spent in imparting to Rawlins the rudiments of the strange language of the bird-peoples which I had learned, but for the most part we occupied ourselves in scanning the air about us for the enemies who we knew were near. Twice we glimpsed, far in the distance, moving black specks that we knew were scouting flying-platforms seeking us, but each time Nor-Kan sent the air-boat down toward the ground to hover motionless until our enemies had passed from sight. A cordon of these scouting platforms would have been drawn up to prevent our escape to the south-polar realm of the bird-races, we knew, and we knew also that to slip through that cordon would be a difficult task.

At last, though, late in the afternoon, Nor-Kan turned to us with some relief on his face. "I think that we've got through them all," he said. "We're south of the last spider-city, now, and within an hour we'll be at the barrier of my own land. Within an—"

He stopped abruptly, the words dying on his lips, as he gazed past us to the right and behind us. We turned, alarmed, and for the moment we stood as appalled as he. Away to one side and behind, speeding after and toward our air-boat in an oblique course, were a half-dozen square black shapes that were now no more than a half-mile from us.

"Scouts of the spider-men!" cried Nor-Kan. "If they overtake us before we get to the barrier we're lost!"

He whirled to the craft's controls, opened its speed

lever to the last notch, and sent the air-boat racing on toward the south in a burst of added speed. The great flying-platforms swiftly leapt after us, hurtling through the air at immense speed and slowly drawing ever closer toward us moving obliquely toward our own course. Closer they came, and closer, air-boat and flying-platforms cleaving the air at a velocity unthinkable; now we saw from the foremost of the platforms behind us a shaft of brilliant orange light that burned toward us as at the same moment Nor-Kan swerved the air-boat to avoid it. He turned toward us, motioned swiftly toward the long, tube-like projector mounted on a swivel at the stern of our own air-boat, and which I had already noticed.

"The static-gun!" he cried. "There are a few charges left in it—try to stop them with it!"

I sprang to the weapon and hastily, at the shouted direction of the bird-man, aimed the long tube at the foremost of our pursuers, and then pressed the button at its base. Instantly a little shining metal cartridge flicked out of the long tube and whizzed through the air to strike the foremost of the flying-platforms squarely. As it did so it seemed to burst, to expand into a faint glow of light that enveloped the flying-platform from end to end. The next moment, from the ground far below, a terrific and blinding flash of lightning had sprung upward and struck the faintly-glowing platform, sending it reeling down in a flaming, shattered mass by that tremendous discharge. The principle of the weapon, as I guessed, was that of the lightning itself, since the missiles it fired contained great charges of static electricity which enveloped whatever object they broke against, giving to that object a powerful electric charge which caused an instant electrical discharge or lightning-bolt, from the ground up toward it, just as a lightning-bolt or so-called "back-stroke" will sometimes burst up from the charged earth toward a charged cloud, just as a lightning-bolt or electrical discharge will flash from one charged cloud to another, or from a cloud to earth.

AS the foremost of them was destroyed thus, our pursuers seemed to waver a moment, to slacken their speed a little, and then they leaped forward again toward us, their brilliant rays reaching and questing through the air in search of us, while Nor-Kan drove the air-boat up and about in swift, erratic evolutions to escape those rays. I saw him pointing ahead, as he did so, saw far ahead a mass of slender, soaring white towers that glistened brilliantly in the sunlight, and that stretched far away on either hand. I knew that we were approaching the polar land of the bird-peoples, and as we flashed on in mad flight from our relentless pursuers, I could understand the nature of the mighty barrier which the bird-races had erected all about their land to bar the hordes of the spider-men forever.

It was a barrier invisible, almost. It could be seen only by a slight flicker in the air that the eyes could hardly catch, but it manifested itself to our ears in a tremendous roaring sound that grew in titanic volume as we sped on toward it. For it was a barrier of winds that encircled the realm of the bird-people, a wall of tremendous, ceaseless winds that roared upward from the ground unceasingly with incalculable speed and power, caused by the bird-people by encircling their land with a sheath of the same gravity-opaque vibrations which propelled their air-boats, and which, projected on the ground in a great circle about their land, caused the air above that circle to rush violently upward, freed of its own weight and pressed by the weight of the air on either side, rushing up in a mighty wall of inconceivably powerful blasts which nothing could

hope to penetrate, up toward the limits of the atmosphere itself. And we were rushing madly on toward this barrier now, with the remaining flying-platforms close on our track.

Their rays were still slicing the air about us as we sped on, and it was only by a miracle that we escaped them in that moment. I again swung the static-gun toward the platforms, sent another of the deadly missiles whizzing back toward them, and another, and another, before the exhausting of its few charges made the gun useless. The first two of my shots went wild as the platforms behind dipped suddenly, but the third caught one of them as it rose again, and as it too glowed faintly with the sudden charge from the missile, another shattering blast of lightning ripped up from the ground far below to annihilate the platform and all upon it. Even as it whirled downward, though, the deadly orange ray from one of its fellows had swung across our own ship, and though Nor-Kan swerved sidewise with the speed of light, almost, the brilliant ray sliced down across our air-boat's side, annihilating a section of that side, so that our speed slowed considerably. Ahead now the mighty walls of winds, roaring upward like the unceasing thunder of doom, and drowning every other sound, was not a thousand yards away, and from the ring of little white projector-stations which controlled it, inside of it, we could see bird-men running out, gazing toward us in excitement. But behind us, now, the platforms of the spider-men were leaping ever closer toward us, their rays no longer in action as they crowded to their platforms' sides, to board and capture us.

Closer they sped on our track, and now were but a scant hundred feet behind us, leaping closer and closer. Nor-Kan, his face set, was driving straight toward the mighty barrier of winds, in which our craft could not live an instant, I knew. Beside us we saw Rawlins' mouth, evidently voicing a cry which I could not hear for the thunderous roaring of those winds. We had almost reached them, now, sucked forward by the on-rushing currents that fed them from either side, the platforms behind still whirling after us, and then I half-closed my eyes as our air-boat plunged in toward its death in those terrific currents.

But as it did so the mighty roaring abruptly ceased, the winds for the moment vanished, as the gravity-sheathing vibrations which caused them were suddenly switched off, inside. We rocketed through and over the projector stations inside, and then the next moment the vast currents were thundering upward again with all their former power, while the pursuing platforms of the spider-men, a hundred feet behind us, drove straight into that terrific barrier.

We saw them whirl sidewise with lightning-like speed as though jerked up by a giant hand, saw them crumpling and collapsing as the vast winds whirled them upward, and then they had vanished far above, smashed utterly and flung upward in less than a second of time, by that mighty wall of moving air through which nothing, Nor-Kan had truly said, could ever pass and live.

Now, as our own air-boat drove in over the ring of projector-stations from which the barrier had been switched off so opportunely for us, I saw that from the city of white towers ahead swarms of other air-boats like ours, many of them much larger, had risen and were speeding toward us. Rapidly Nor-Kan hailed them, and as they turned to carry back to the city news of our arrival, we limped on toward that city in our battered craft.

A far-flung mass of soaring white towers it gleamed, in the light of the descending sun, and in the distance beyond it I glimpsed other masses of similar towers, other cities of the bird-people, all gathered here behind

the impenetrable barrier in this polar realm that was their last refuge. Now, as our craft slanted down into the city, down between the soaring towers toward the base of the greatest of them, I saw that in the wide streets beneath us were gathered masses of the bird-people, all of the same appearance as Nor-Kan.

As our air-boat came to rest at the base of the mighty building, we stepped off it, into those swarming, wondering masses, as grotesque-seeming to our eyes as we must have been to theirs, and were led by bird-men whose leather straps bore a peculiar insignia, into the building before us. There, with Nor-Kan, we were conducted into a long, bare white room, with high ceiling and high-arched windows, in which the only furniture was a great rectangular white block at the room's center, about which, as about a table, were grouped a dozen or more square seats.

At the end of the block was seated a bird-man of the same appearance as all the others we had seen, but with a commanding aspect and expression which silently proclaimed him a person of authority. He greeted Nor-Kan calmly as he entered, spoke to us with an interest and wonder his features could not conceal, and then turned from us as into the room a dozen or more other bird-men entered, whom he also greeted briefly, and who then seated themselves, with us, around the great block-table at the room's center.

NOR-KAN had informed me that this was the ruling committee of the races of the bird-men, each of their cities being represented upon it, and that it was in response to his own summons that the members had been hastily assembled. Now, as they seemed to wait in silence, he rose to address them. He told them, briefly, of his own capture by the spider-men, of his meeting with me, and of our hazardous escape from the spider-city. He stressed the fact that Rawlins and I had come from a world interlocking with their own, and though there was wonder on the faces of the bird-men, I saw that their own science was great enough to enable them to appreciate the possibility of the two worlds interlocking in this manner. Then Nor-Kan explained that Adams, a human like ourselves, had joined the spider-men, and was planning to transpose all their cities, all the hordes in those cities, into our own world, to conquer and destroy, having set up ray-projectors for that purpose beneath each of the spider-cities, and being now engaged in completing the central control for all those projectors, which was located on the top of the central cone where we had confronted Adams. That central cone itself, as Nor-Kan told them, would not be transposed into the interlocking world, being protected from the rays, but all the city around it and all the other cities of the spider-men would be so transposed.

"And that means defeat and destruction for ourselves, as well as for Rawlins and Harker and their races," said Nor-Kan. "Hitherto our mighty barrier of winds has kept the spider-men from entering our realm, since none of their flying-platforms could ever pass it, and our cities and stations from which it is projected are set too far back from it for their molecular rays to reach. But if they burst into this interlocking world of Rawlins and Harker, then all that they will need to do is to fly south to the polar regions of that world and be transposed back into this one, and they will be inside our barrier, leaping upon us and destroying us. There is but one chance for the races of the bird-peoples, and that is to destroy the ray-projectors which Adams has built to transpose their cities into the interlocking world, and to do that we must gather all our forces and sail north, must swoop down on the city where Adams is working now at the completion of the con-

trols of his deadly mechanisms, and must destroy them before he can finish them, before they can flash the spider-cities and all their hordes into the interlocking world."

There was a silence in the room when Nor-Kan's deep voice had ceased, a strange stillness broken only by the hum of distant voices that came whispering into the room from the anxious masses of the bird-people that had gathered in the streets outside. In the decision of the committee and its leader, we knew, there rested the fate of both interlocking worlds and in a tense silence Rawlins and I waited for that decision. At last the bird-man at the table's end rose and slowly spoke.

"For age upon age," he said, his deep voice vibrating through the room, "we races of bird-peoples have clung to our refuge here at the southern pole, have sheltered ourselves behind our barrier while our ancient enemies, the servants whom our own ancestors developed to be their doom, have mastered all the rest of this world, which once we mastered. Fewer than the spider-men in numbers, pressed by their hordes down into this last refuge at the southern pole, we have not thought of attacking them in force, but have been content to defend ourselves. But now, as Nor-Kan has told you, we must attack and defeat them, or perish. So that now, as ruler and leader of the races of bird-peoples, I say that all our forces shall be gathered together here as swiftly as they may be gathered, and shall sail north to attack the spider-men and destroy the deadly thing that Adams has built for them, shall flash north to strike with all our power the one great blow which alone can save from the spider-men the two interlocked worlds!"

## CHAPTER V.

AS our craft slanted up into the sunlight above the towering city of the bird-peoples, two days after our arrival at that city, I saw, rising below and beside us, score upon score of long air-boats like our own, literally hundreds of craft, each manned by a score or more of bird-men. During the two days we had spent in their city those fleets of ships had been gathering there, racing on in answer to the call from each of the bird-people's cities in this strange realm at the pole. More than a thousand in number, they had massed at this northernmost city of the bird-people, each ship equipped with static-guns and with other weapons that had been hastily devised for them.

During those two days, too, Rawlins and I had seen but little of the city of the bird-people, for Nor-Kan had been appointed as leader of the whole fleet, and we were busy with him in devising a plan of attack. We had decided that our best plan would be to head straight toward the spider-city, where we had been imprisoned, and where we knew Adams was laboring to complete the controls of his apparatus on the central cone, to transpire to our earth the spider-cities and their hordes. Once at that city we were to sacrifice all else to destroy that central cone and the deadly apparatus upon its top, and it was our hope that by the fury of our attack this end might be accomplished.

Now, as Rawlins and I stood with Nor-Kan on the sunken, sheltered deck of the long air-boat that was the flagship of the fleet, we could see all our myriads of craft rising around us, slanting up with us until the great fleet hovered momentarily above the soaring white towers of the city of the bird-people. Swiftly, as the signals flashed from our own craft, the air-boats gathered themselves into a fighting formation, arranging themselves in three long lines not far apart, and then, as another signal flashed, the whole fleet, with our

flagship in the van, began to move out over the city, smoothly and silently, toward the north.

Looking down I saw the streets and squares of the splendid city below us thronged with crowded masses of its inhabitants, watching in silence as their silent fleet moved out to battle. Glistening, shining, in the brilliant morning sunlight of the blue-white sun to our left, the hundreds of long, graceful craft were an inspiring sight as they moved steadily forward, and I saw pride in the eyes of Nor-Kan as he glanced back over the shining files that followed us.

"Never before has such a force of my race gone out against the spider-men," he said to us, "and for that reason our attack, I think, will be a complete surprise to them, so that we can swoop down upon them before they're aware of our presence."

I nodded, without answering, for by this time we were approaching the great wall of winds whose thunderous roar made all speech difficult. Nearer we sailed toward it, high above the ground, and the roaring of the mighty, invisible barrier was deafening, when abruptly as before, it ceased, the winds subsiding, as the projected vibrations opaque to gravity, which caused them, were snapped off to allow us to pass. Onward our fleet smoothly sailed, through the air where the wall had been, and then, as the last of our ships came through and beyond its circle, the vast winds again sprang into sudden being, roaring upward again with renewed and deafening power.

Now our fleet was moving faster, was rising into the air, until we were flashing northward almost at full speed, and at a height of perhaps a mile above the ground. Behind us the towers of the bird-men's polar cities faded out of sight, while we sped north above the blue plains toward the spider-city that was our goal. Far below we could make out the same weird landscape over which we had flashed on our wild flight southward, the strange vegetation that moved on it, being the only sign of life, as before. Hour after hour, we sped on, evading the southernmost cities of the spider-men as we had done on our own escape, heading straight toward the city where was Adams and the thing of dread that he was completing. Even yet, we knew, a delay of minutes might doom irretrievably our own world and this interlocking one.

Abruptly I was aroused from these gloomy musings by a wild shout on one of the air-boats just behind our own, and as I stared about I saw swooping down upon our fleet from high above, a dozen or more of the great flying-platforms, that had evidently been scouting high above us and were now plunging straight toward us. For the moment there was only wild confusion in the bird-men's fleet as their ancient enemies flashed down upon them, and that moment was used with a deadly advantage by the spider-men above. For as they drove down upon us, shaft upon shaft of the brilliant orange rays was searing down to cut lengthwise along our fleet, sending a score of our ships into instant annihilation before we could recover from the shock of that staggering and deadly attack.

As the platforms whirled down above us and up again for another plunge, though, Nor-Kan cried out a sharp order, and from our own ship and the hundreds behind us, a hail of deadly missiles from the static-guns whizzed out toward the speeding platforms, that had now drawn some distance ahead of us. So innumerable were the missiles fired, and so close was the distance, that before the platforms could flee, all but three of them were glowing with faint light as the shots struck them and charged them, and then from beneath, bolt upon bolt of shattering lightning had leapt up from the ground far beneath and struck the glowing plat-

forms in blasting bursts of dazzling electrical fire, so that they whirled down in riven, blackened masses toward the ground.

THE three platforms which had escaped the missiles were racing northward away from us, now, at their highest velocity, in an attempt to escape, and up toward and after them leapt a score of the swiftest of our craft. We saw the orange rays of the three burn back and annihilate several of the pursuing boats, but as they disappeared in the distance ahead of us, we saw the static-guns hit their mark in two cases, at least, as two of the fleeing platforms were struck by the terrific lightning from beneath. Then the remaining platform and the pursuing air-boats had vanished from sight, and when some minutes later the air-boats returned, it was to report that the platform had escaped them, due to its start upon them, and had vanished while still heading toward the north.

"No surprise now!" exclaimed Nor-Kan grimly, as our great fleet leapt on. "We may get there, though, before the spider-men can gather their fleet!"

At the highest speed of which our ships were capable, we drove northward, now, for we knew that the escaping platform would spread the alarm instantly and bring down upon us all the overwhelming forces of the spider-men, from all their scores of cities. Our only chance to accomplish what we sought, was to reach the spider-city, which was our goal, before the enemy could assemble, and so now it was in a tense race against time that our thousand ships sped north. Faces set and tense, Nor-Kan and Rawlins and I stood on the flagship's deck, gazing away to the north while the blue plain far below unrolled with unvarying speed, and while the long files of ships behind us, their formation a more compact one, now drove through the air on our tracks.

On we flashed, toward the north, while hour followed hour and while the sun climbed up to the zenith and was slipping down again. Then abruptly Rawlins raised his hand, with an exclamation, and pointed away toward the horizon ahead. We all gazed, with hearts suddenly beating more swiftly, and then Nor-Kan had turned, had given an order, calmly and quietly, and our whole great fleet was slanting up toward a still greater height. For there, far ahead of us, there hung in the haze above the horizon a long, wavering line of small black specks, specks that were rapidly growing larger, growing distinct in shape as square black platforms, as they rushed toward us. It was the spider-fleet!

On they came, in a long, curving line of length so great that its two out-curving horns could hold within them the whole mass of our own fleet. A full five thousand platforms must have been in that mighty line, we knew, and at the sight of such overpowering odds a closed hand seemed to hold my heart tightly. Then, as the two fleets rushed madly together, the despair that had gripped me vanished, and in a strange calm, as if I had become an impersonal spectator, I watched the nearing swarms of platforms.

In a great semi-circle they were flashing toward us, now, and as they came nearer innumerable dazzling streaks of the brilliant molecular ray burned out from them, shafts of orange light that cut through the air toward our ships like questing fingers of death. I heard hoarse shouts about me now, saw ship after ship of our fleet vanishing as the slicing, whirling rays reached them, but before more of the platforms could fire upon us, Nor-Kan had snapped a quick order, and as a signal flashed from our flagship our whole fleet veered sharply to one side, and instead of moving on between the out-curving horns of the spider-fleet's

formation, which would have exposed us to the concentrated rays of all their platforms, we sped past the rim of the semi-circular formation, which screened us effectually from the rays of the greater part of their fleet.

As we flashed past the outer side of their formation thus, there leapt out from the massed static-guns of our air-boats hundreds of the metal missiles, the majority of which struck the platforms they were aimed at, and the next moment while those platforms, glowing now with the static charge, leapt upward in an effort to escape, there flashed up from beneath them the destroying bolts. I heard a crazy cheer from the bird-men on the craft about me as our fleet, still holding its formation, wheeled quickly to speed back upon the spider-fleet's other side and repeat our maneuver, for literally scores of their platforms were whirling downward in flaming masses as a result of that skillful attack. Before we could repeat it, though, they had seen our intention, and as if in answer to an order, their formation abruptly broke up completely, and in a disorganized vast swarm of single platforms, they turned and leapt upon us.

It was a tactic which we had not anticipated, and for the moment it took us at a complete loss. Before any order could be formulated to meet the change in the situation, the flying-platforms were rushing upon and among us, in compact groups, and then as their rays whirled about and cut great lanes of destruction among us, our own formation vanished and our ships sought individual opponents among the myriad platforms that were speeding upon and among them.

The next moment it seemed that our flagship was lost in a whirling, tossing sea of striking and struggling ships and platforms, a hell of battle raging about and above and beneath us, stunning to the senses. Out from the omnipresent groups of platforms streaked the deadly orange rays, whirling and stabbing, their effects not noticeable at once, except for the empty gaps that opened abruptly in the field of battle, where air-boats had been but a moment before. And from our ships in turn leaped the shining cartridges of the static-guns, platforms all about us glowing faintly as the missiles struck them, and bolt upon bolt of crashing lightning leaping up from the ground far beneath to strike those glowing platforms.

From all about us, it seemed, the orange rays were flashing toward our own ship, the flagship, and it was only the skill of the bird-man at the controls that saved us from annihilation in that mad moment. With tremendous speed our craft dipped and twisted to avoid the whirling rays, our own static-guns raining shining missiles upon the surrounding platforms, but even so one of the stabbing rays struck close enough above our decks to instantly decapitate a half-dozen of the bird-men at the static-guns. At once I sprang with Rawlins to the guns, and while Nor-Kan, as calmly as ever, shouted his orders behind us, we swung the guns upon the platforms that swooped and circled about and above us, and whose rays cut crazily through the masses of struggling ships.

I saw one of the big, square platforms leaping toward us from the right out of the ruck of the battle, and in that wild mêlée, I seemed to observe it with photographic clearness and accuracy in that instant, the cylindrical mechanism at its corner, the score of hideous, many-limbed spider-men crouched upon its surface, the ray-tubes along its sides, all microscopically clear before my eyes. Then as it flashed toward us and as I saw a spider-man upon it gripping his ray-tube and swing it full upon us, I swung the static-gun in my grasp straight toward him and before he could loose the ray, the missile from my gun had spread a

glowing light over the platform and the crashing lightning-bolt from far below had smitten it and changed it into a fiery mass of fused metals and charred bodies that tumbled crazily downward.

As it did so, we were thrown violently to the deck, as our craft swerved sharply sidewise, just in time to escape a slender shaft of the brilliant orange ray, that grazed up past us and demolished a struggling air-boat above us. In the next moment, the platform from below that had loosed that ray was struck by a blasting bolt from the ground as an air-boat beside it struck it with one of the static-missiles. And then that air-boat, in turn, had vanished, hit in that unguarded moment by a ray from its other side. As it did so I heard Rawlins cry out, point upward, and saw hovering directly above us one of the platforms that was swinging its ray-tubes down toward us. There was no time to swing up our own static guns, no time to swerve aside, but the next moment the bird-man at the controls had jerked them sharply back and sent our air-boat racing upward, its sharp prow striking the edge of the platform above and tipping the big flat square sharply over so that it swung clumsily in mid-air for an instant in that position. Then a shining missile had struck it and a crashing bolt from far beneath demolished it as our ship drove up above the battle.

UP we flashed, up until the field of the battle stretched a thousand feet below us, a mighty, far-flung mass of whirling platforms and air-boats, of stabbing orange rays and lightning-flashes from beneath. Platform after platform had reeled down, struck by those tremendous bolts, but the tremendous disparity in numbers had told against us and now but a half or less of our original fleet struggled below us, against platforms many times their number. Such an unequal struggle could not last for long, I knew, but now I heard Nor-Kan utter a short order, and as a series of signals was flashed from our flagship, circling there above the battle, there flashed up to join us a dozen air-boats which until then, by his orders, had taken no part in the struggle.

As they drove up beside us, I saw that these were the craft which the scientists of the bird-people had hastily equipped with a newly-devised weapon of which I knew nothing, a long, blunt black cylinder that was mounted at the prow of each air-boat. They gathered about us, then turned the cylinders down upon the flying-platforms that were swarming in fierce attack upon our air-boats there below. As they aimed the blunt cylinders, there came from them a loud humming, but no other evidence of operation. Looking down, though, I saw the platforms below at which they were aimed tumbling helplessly down toward the ground, far below, reeling down in crazy destruction toward the blue plains, while all about us the bird-men cheered madly. Over their shouting, Nor-Kan explained to me that the blunt cylinders were similar to the cylinder-mechanisms upon the platforms themselves, which propelled those platforms by giving them a powerful magnetic charge which caused them to be attracted by this world's magnetic poles. The blunt cylinders on our air-boats, in turn, gave to the platforms at which they were aimed an equal charge of opposite polarity, and the two thus equalizing each other, the platforms were attracted by neither pole and robbed of their sustaining and propelling powers, tumbled down to destruction on the ground far below.

Platform after platform was falling now, while from our air-boats below the static-guns were vomiting a rain of deadly missiles upon the spider-men who still opposed them. Swiftly the odds were changing, and

now it seemed that within a few minutes more the battle would be over, since but a scant few hundred of the platforms were left. Abruptly, however, these massed together, seemed to pause for an instant. Then we saw a group of the spider-men massing around a small globular apparatus on one of the platforms, and even as we turned our weapons upon these massed platforms, even as the air-boats below leapt toward them, we learned the reason for action, and learned that they too had weapons of which we knew nothing. For before either our magnetic cylinders or the static-guns of the air-boats below could be trained upon them, all light about us suddenly vanished, plunging us into a rayless night, in which there gleamed no single spark of light!

From all around us and from far below, we could hear cries of dismay and fear from the bird-men on our air-boats, as the blazing white sunlight about them gave way in an instant to that impenetrable darkness. The nature of that darkness was plain enough; it was obviously produced by some apparatus of the spider-men which killed the vibrations of light by opposing to them a dampening vibration, extinguishing every ray of light over an unguessed area. Blindly we drifted through that torturing darkness, and from below we could hear shattering crashes as our air-boats collided with one another in that darkness. Then I felt a wind on my face as our craft began to move swiftly through the darkness, at an order from Nor-Kan, and a moment later it burst abruptly out of the darkness into the fierce white light of day.

Behind us lay the dark area, like a vast blot of blackness in the heavens, produced by the apparatus on the platform that must still have hovered at its center, but now we saw that the other platforms, no more than a few hundred in number, had taken advantage of the concealing darkness they had thrown about them to flee, since away to the northward their dark shapes could be seen diminishing as they sped from us. Our own air-boats were gropingly emerging from that lightless area, now, and as they gathered about us again Nor-Kan shouted an order and we raced northward after the fleeing platforms, only a score of our own ships remaining and firing static-missiles into that dark area in an effort to destroy the platform with the apparatus which produced it, inside. As we sped away, I saw the blackness suddenly vanish, and knew that their missiles had found the lurking platform inside it, and then they were speeding along with us in hot pursuit of the flying shapes in the distance.

On we flashed, a fleet still over five hundred strong while far ahead of us the remaining scores of platforms fled. "They're making for their city—the city where we were!" Rawlins shouted in my ear, over the roar of the wind that was about us now as we raced on. "They must know that Adams is almost ready to transmute their cities and them, into our world!"

I nodded mutely, my eyes upon the dark, flashing shapes ahead, and I saw, beyond them, the looming gigantic cones of the spider-city where we had been imprisoned. The dark, mighty cones, the tremendous wall about them, the cables that led from the top of the cones to each other, all were as they had been, though now those cables and the streets beneath were swarming with innumerable hordes of the spider-creatures racing about in wildest confusion as their shattered fleet drove down toward them. And down after that fleet our own ships flashed, down until we were within hundreds of feet of the tops of the mighty cones, down until we could see the clearing at the city's center, and in it the single cone, and upon that cone's top a single dark figure who was working madly with the connections of a great mass of apparatus before him.

"Adams!" shouted Rawlins, pointing downward, and

I too shouted as I saw what was happening, saw that now, at the last moment, Adams was struggling to complete the last details of the controls which would in a moment transpose all the mighty city around him, and all its hordes, and all the other hordes and cities of the spider-men, into our interlocking world. Down toward that central cone our whole fleet swooped, but up to protect it there rose the last few hundred ships of the spider-men's fleet, the last few hundred platforms that came crazily up toward us in a last wild effort to hold us back from that building-top below where Adams was working madly to complete the connections of the apparatus that would give to them another world.

Up they came toward us, and the next moment we had met them and over the city of the spider-men there was swift, terrific battle, orange ray and static-missile leaping from air-boat to platform and from platform to air-boat, craft of bird-men and spider-creatures alike smashing down to death in the city below them. Above the top of the central cone there hung the last of the platforms, resisting with the mad energy of despair all our efforts to reach it. All about us air-boats and platforms alike were reeling and falling and vanishing, amid the fury of that wild combat, but now, one by one, the platforms were being annihilated, and now as a gap opened between them, Nor-Kan, at the controls of our own air-boat, sent it whirling down toward the top of the great cone below us.

As our air-boat swooped downward, the rays of the platforms on either side swept along it, annihilating the last of our bird-men crew and leaving only Nor-Kan beside Rawlins and myself. In a moment more the craft had crashed down at the edge of the cone-top, where Adams, oblivious to the battle above, was working madly on the last of his connections. We sprang out upon the building's top, but as we did so, there poured up on the ascending belt-stairway a half-dozen of the spider-men, leaping between us and Adams. I saw Nor-Kan strike out in great blows that sent two to the floor, and then, as Rawlins and I were gripped by others, saw him lift one bodily and hurl him down into the round shaft up which the ascending belt moved, down through the building toward its floor far beneath. Then he too was struggling with the remaining one, while Rawlins and I twisted in the grip of our opponents with the madness of utter despair.

I glimpsed Adams, burning-eyed, finishing his connections, saw that the last of the platforms were almost gone, that the air-boats were swooping down toward us. In that moment, though, there came a crazy shout from Adams, and he was leaping toward the metal pillar that rose from the floor just beside the shaft of the ascending belt, was leaping toward the big lever-switch upon that pillar from which ran the connections of all the massed apparatus behind him, the connections, I knew, of all the great ray-projectors in all the cities of the spider-men. I saw his hand close upon that switch, as I struggled helplessly in the grip of my spider-man opponent, and knew that the next instant would see the closing of that switch, the turning on of the projected ray at full force on the city around us and on all the cities of the spider-men, the transposition of all those cities, all those hordes, into the world of man, never to be undone.

But in that moment there came a hoarse shout from Rawlins where he struggled with his own opponent by the roof's edge, and I saw him hurl the hideous figure of that opponent from him with superhuman force, breaking him bodily upon the floor, saw him leap forward toward Adams, toward the switch. As he leaped, Adams saw him, jerked down the switch with a swift motion, down the graduated slot which measured the

force of the ray it loosed. But he was late—an instant late. For as he jerked it down, Rawlins' hand had shot up toward it, had stopped it half-way down the slot, so that instead of the ray's full force, it loosed upon the spider-cities but half that force.

THERE was an instant of utter silence and stillness, an instant in which it seemed that all motion and all sound in all the world had ceased. Then there broke about us a titanic detonation that was like the crash of meeting spheres, the death-shout of riven worlds. And in that instant the vast city about us, the massed gigantic cones and the cables that connected them, and the streets below and all the spider-hordes in the streets and on cables, all these had vanished, disappeared, whiffed out of existence, so that about this central cone there now lay nothing but a vast depression in the barren blue soil; the city that had stood for ages upon it was gone.

Gone! Gone forever; gone as all the cities and all the hordes of the spider-creatures were gone, whiffed into sheer non-existence when the ray that was to have transposed them into our world, was turned on at half-force instead of full-force, not having power enough to reverse the motions of the electrons in the interlocking masses of matter, to transpose them from world to world, having power enough only to halt those motions, to destroy that matter as though it had never been. In our own world, I knew, the corresponding sections of matter that interlocked with the spider-cities must have been annihilated at the same moment, but what was that small loss compared to the doom of man's world that had been prevented? What was it compared to the removal forever of the menace of the spider-creatures from the two locked worlds?

As that tremendous detonation died away, Nor-Kan and I had almost at the same moment, thrust from us our opponents, limp and dead, and now we leaped forward to where Rawlins and Adams struggled by the switch. But before we could reach them, we saw Adams thrust Rawlins back, saw him gaze around, a hell of hate in his burning eyes as he saw his work thus destroyed, his vast and evil plans thus thwarted. Then he had whipped one of the deadly ray-tubes from his belt, levelled it upon us, stepping sidewise to loose that death in a sweeping circle upon us. But as he did so, as he stepped unseeing, his foot encountered empty space—the open belt-shaft beside the switch—and he reeled down into that shaft, only a thin scream coming up toward us as he whirled downward, and then a dull, half-heard thudding sound from far beneath.

We stood motionless, all but senseless, and then saw that the last of the platforms had been annihilated, that the air-boats were swooping down upon us, down upon the top of our cone, the last left of all the vanished city. We stepped to our own air-boat, and began driving up with the others, up above the cone-top, up until all hovered motionless high over it. Then a rain of shining missiles swept down upon it, the great structure glowed everywhere with faint light, and then from all about it there had leapt crashing bolts of terrific lightning, mighty electrical discharges, that wreathed the great cone for an instant in a shroud of violet fire. Then it had crumbled, crashed, fallen, and as the dust-cloud of its collapse cleared away from the place where it had stood, we saw that only a low mound of shattered, blackened fragments lay there, the last of the works of the spider-creatures, of all their hordes and cities. Then, as we hung there, we became suddenly conscious that in all the world at that moment there reigned a tremendous silence.

CHAPTER VI.

IT was days later that Rawlins and I, standing in the little crater where first we had found ourselves in this strange world, bade our friends, the bird-people farewell. Those days following the destruction of the spider-creatures and their cities, we had spent in the polar land of the bird-men, and there, with the help of their scientists, we had constructed a transposition-apparatus like that by which we had come into this interlocking world from our own. Now, standing there in the hot white sunlight at the little crater's bottom, with the big disk-apparatus behind us, we faced the scores of bird-men who had come north again with us to this spot to see us go.

One by one, in their deep tones, they wished us well and tried to express their gratitude for what we had done for them, assuring us that when we had gone, the transposition-apparatus would be destroyed, and the last link between the two interlocking worlds on their side would be severed. One by one we took our leave of them, there in the brilliant light of the blue-white sun above, and then last of all of them, Nor-Kan came forward, his face strangely still and solemn, and gripped with his taloned hands, the hands which we outstretched toward him; he stood thus for a moment in silence.

"Goodbye, Rawlins—Harker," he said. "We are different far, bird-man and human, but we have fought and dared together, at least. And together we have helped to save our worlds."

We wrung his taloned hands, without speaking, and then turned toward the big disk-apparatus behind us, the masses of apparatus to which it was connected. Slowly we stepped upon the lower disk, and then, more slowly still, Rawlins reached out toward the switch. He grasped it and then, even as we had done before, we paused, glancing around for a last time at the weird, wild landscape that we should never behold again

—Nor-Kan and the other bird-men gathered about us in the dazzling white sunlight, on the blue ground studded with shining pebbles, with the slowly moving patches of blue vegetation. Then Rawlins jerked down the switch.

Again, from the disk above us, a blinding white light poured down upon us, and as it flooded through us with the same titanic force, I had a last glimpse of the weird landscape revolving about me with immense speed, and then it had vanished, as we seemed to be sucked down into a roaring maelstrom of darkness, on which I involuntarily closed my eyes. The roaring lessened, the wild motion that had thrilled me died, and slowly I opened my eyes again. And, even as I had expected, I found myself with Rawlins beside me in his little laboratory, its electric lights still burning and its door still tightly locked.

Beside us there stood the big disk-apparatus by which we had gone into the interlocking world after Adams, and in a moment we had dismantled it, had smashed its delicate actuating apparatus with heavy blows, had closed forever the last gate between the two interlocking worlds, the two universes, a gate which it was never meant for man or any other to open or pass through. Then we left the little laboratory, the big building, and paused outside on its steps.

It was night in the world outside, as when we had left it, a softly scented summer night in which the only sounds were a few distant voices, and the whispering of the breeze. We had no thought, in that moment, for the strange wonder that would be stirring this world concerning the cataclysms that had blasted it out of the unknown, had no desire to explain to that world how through those cataclysms had it and the world locked with it been saved from a dreadful doom. We wanted only to stand there, in that moment, silent, motionless, with the cool wind upon our faces, and the soft, familiar sound of human voices in our ears, and above our heads the calm, unchanging splendor of the stars.

THE END.

## Change Eternal

From a proton to a planet,  
From electrons to a star,  
Moves the universal essence,  
Going fast and going far;  
Forming atoms, solar systems,  
Molecules and Milky Ways;  
Drenching comets, suns, and clusters  
With a rain of cosmic rays.

From a colloid to a primate,  
From amoeba to a brain,  
Slowly climb the vital essence  
Through eonic sun and rain.

Out of dark and dreams it wakens,  
Rises out of hate and strife,  
Curbing fear with fact and reason—  
Dying often into life.

Back to protons from a planet,  
Back to atoms from a brain,  
Swings the energetic essence,  
Canceling its loss and gain;  
Ever restless, ever ranging,  
From its monads to its stars;  
Ever changing, yet eternal,  
Through its countless avatars.

*By Leland S. Copeland.*

# The CRY from the ETHER

## By Aladra Septama

Sequel to: "The Beast-Men of Ceres"

**S**O S! S O S! S O S! the call came speeding in from the ether in the interplanetary code—abrupt, hurried, insistent, seeming to possess a frantic note of mortal agony.

Little did Severus Mansonby, interplanetary investigator, think, when he returned a few years before from his thrilling and dangerous journey to the tiny planet Ceres, 100,000,000 miles beyond Mars, that he would be recalled on so urgent and so tragic a mission. It was thought then that neither Jupiter nor any other of the outer ring of planets of the Solar System was inhabited, and the inner planets were all known to be living under the Interplanetary Code.

It will be recalled by those who have read the adventures of the "Beast-Men of Ceres" that the resources of Mansonby's entire great interplanetary detective system had been drawn upon in the rescue of the Earth women who had been abducted by the mysterious invisible Beast-Men of Ceres. This abduction had been committed in an effort on the part of the Cereans to avoid extinction. Their women, from time and the various contingencies through which they had passed, had all died or become too old to bear them children, and they had at last hit on the desperate expedient of importing wives from other planets, deciding upon

Earth women as preferable to those of the other planets of the Solar System. These had been chosen from Europe and North America and forcibly abducted. Among others, they had carried off not only Signa Latourelle, the adored Parisian wife of the great master detective, but also Therna Lawrence, who was the daughter of Octavus Lawrence the great interplanetary financial wizard and the wife of Calder Sanderson, famous scientist.

They could hardly have made a more unfortunate selection for the success of their experiment; for they had at once arrayed against themselves the greatest detective, scientific, and financial minds in existence.

Mansonby, with practically no tangible clue to go on, had quickly traced the abductors to their home on distant Ceres, one of the multitude of bodies known as minor planets revolving in the planetoid belt between Mars on the inside and mighty Jupiter on the outside. The company of a hundred Tellurians and Martians had been divided among five otherships, so that the

venture would be able to carry on if one or more ships should be destroyed by the enemy or by the unknown perils of the hazardous passage through the planetoid belt. There had been a short stop on the way, at Mars, to take aboard Mansonby's head Martian operative, the giant warrior Maltapa Tal-na, and his picked crew of men.

Twenty-nine days had been consumed in the voyage from Earth to Mars, and a longer time from Mars to Ceres. No sooner had the detective fleet arrived off Mars, bearing the scars of their battle with the Cerean fleet sent to intercept them, than word had come in from a Martian-bound vessel of the Solar Transit, a line owned by Octavus Lawrence, that the Cereans had

just passed them at a terrific speed, headed home with their captives. The Cerean ships, employing an advanced principle of flight, were greatly superior to those of the Tellurians, and it was despairingly realized that they would out-distance the latter by many weeks.

But the Earth fleet had carried on bravely and arrived at last at their goal—the home of the Beast-Men. After operations during the course of which the astuteness and resourcefulness of Mansonby, pitted against the great advancement and almost superhuman cleverness of the Cereans, had reduced the situation to a practical stalemate, a truce

was agreed upon. The Cereans had become revealed, then, as in truth no beast-men at all, but the "Lost Race of Mars," of great antiquity and enlightenment, who, on account of the intense cold of outer space, had clothed themselves in skin-fitting garments of fur in lieu of clothing. This "Lost Race of Mars," a people given up to science, had been banished from Mars by the younger and warlike races many hundreds of years before, and had made themselves a home on the little minor planet Ceres.

The truce between the Tellurians and the Cereans had given rise at length to a mutual friendship, which had resulted in the younger element of the Cereans forsaking their difficult home and returning with the Tellurians to Earth, where they had wedded and settled down to live. On the arrival of the rescue fleet at Ceres, they found that the fair Adrienne LaCoste had already mated with Zah Ello-ta, the leader of the Cereans. Others of the abducted women had also taken Cerean mates.

*W*HILE it is true that Jupiter is, as far as we can tell, uninhabited and uninhabitable, what assurance have we that there may not be hidden in some area of that gigantic planet not only intelligent life but fairly endurable living conditions—at least for those who have become thoroughly accustomed to it?

Apparently, running the Beast-Men down to their lair did not solve everything; for in this sequel to "The Beast-Men of Ceres" the author has done some remarkable work. Those of you who have read the first story have an idea of what you can look forward to in the sequel. "The Cry from the Ether" is superior in every respect to the first story, fine as that was. We know you will thank the author, as we have, for so promptly and cleverly following up the adventures and scientific attainments of the Tellurian Detectives and the Beast-Men.



As the fleet maneuvered to the south of the Equator, the Great Red Spot sped into view beneath them, and even the upper air became intensely hot....here was a moot point on which the astronomers on earth had held solemn conclave for centuries....at last these almost fanatic scientists were to know the "cold hard facts."

The elder Cereans had elected to remain on the little planet which had been the home of their people for so many centuries.

Four years had passed since the return to Earth—four years almost to a day—when this cry came out of the ether spanning the 150,000,000 miles between Ceres and Earth—this frantic agonized cry for help.

The ether ships of that day traveled on the Sanderson electromagnetic gravitational currents, plus the powerful impulses of atomic disintegration. The ether offering no resistance, the successive impulses would have permitted an unlimited speed; but at that time certain difficulties had remained to be overcome in respect to protection from the aerolites—the small bodies infesting all extra-atmospheric space—collision with even the least of which would be likely to spell irretrievable disaster to the staunchest vessel. In the four years Sanderson had increased the efficiency of his existing “finders” to the point where this danger could be practically ignored.

And so came the cry.

... ——— ... ! ... ——— ... ! ... ——— ... !

At the time of its coming, Mansonby, with his wife, Signa Latourelle, and a party of immediate friends, was enjoying a leisurely party at the Passawampa Gardens, a favorite aerial resort over the city of St. Louis. Of the company was Zah Ello-ta, the former president of the “Cerean Republic,” as the handful of a thousand or so inhabitants of the little planet had come to call themselves, with his French wife, the young and beautiful Adrienne, and Professor Calder Sanderson, with his wife, Therma Lawrence. Since the return from the pursuit of the Cerean abductors, these six had become fast friends, and the Passawampa Gardens was one of their favorite foregathering places. Singularly enough, it was also the very place where Sanderson and his wife had had lunch together just before starting out on the aerial trip in the course of which Therma Lawrence had been stolen away by the Beast-Men of Ceres.

Mansonby was known as one of the hardest workers in his organization; but in self-defense he was compelled to get away occasionally. This was one of the times. It was a jolly party, and the three men endeavored to throw off, as far as possible, the heavy burdens that normally rested upon them.

But even on such occasions, Mansonby was bound to remain in touch with his head office in New York. Affairs of import were at all times in his charge, and their successful conduct depended upon instant contact with the master mind. He was the very breath and blood of the intricate interplanetary system whose offices occupied almost the entire 178th floor of the Atlantic Building, in the “City and State of New York,” so called because, the limits of the city having come to be nearly coterminous with those of the state, the governments had merged.

Therefore, even on this occasion of comparative rest and jollity, there rested on the table at Mansonby's elbow a small but marvelously efficient appliance through which he received constant messages from his offices and other points. Occasionally he would speak a word or two into it; give a terse direction; ask a question—then turn back and continue his conversation with the company as if he had not been interrupted by some message, concerning distant Mars perhaps, or Venus, or Mercury. This was his artery of contact with the body of his business, even in his hours of leisure.

The discussion had been chiefly of the holiday journey to Ceres, planned for nearly a year, the preparations for which were then about complete.

Zah Ello-ta was speaking. In the four years of his

life on Earth, he had, of course, come to speak the American language as well as the others, and it was no longer necessary to have recourse, as at first, to the interplanetary tongue.

“Mansonby, my friend,” he said, with a quizzical look on his refined and intelligent face, “I shall be glad to get you away for once from that cursed instrument. Just when I have amusing things to say, it talks to you or you to it. Just when I had reached the critical point of that joke a moment ago, a joke which, I may say, is one of my best, you turned away to it. How you could do it, I don't quite know. It was a good joke. At any rate, I'll wager you haven't the faintest idea what it was about and I've a good notion to tell it over again, just to get even.”

The company laughed. “There, now, Mr. Detective,” put in the charming Adrienne, “there's a chance to acquit yourself of a serious charge. We mortals expect you immortals to know everything at all times, to be able to think and talk about them all at once, and at the same time to follow each with the tense and concentrated attention with which we others might try to follow. Come, now, I call you to the bar of judgment. If you are not to be convicted of mortality, what was Zah's joke that he likes so well? Although I must confess I've forgotten, myself.” She made a face at her husband.

Mansonby smiled indulgently at the girl. “My dear, I'm greatly overrated. There is no doubt at all about that. But please don't repeat it. As a matter of fact, I am only—”

Signa Latourelle leaned over to stroke his face. “Sh! You shall not say it, *mon ami*. I do not permit. For I know you to be the greatest man. A master man, *mon ami*; prodigy, if you will; like you there is no other; you will not say so much as the one word against yourself.”

Ello-ta shook his head in hopeless appeal at Therma Lawrence, and even the grave Sanderson smiled. “Funny thing about Signa,” Ello-ta bewailed, “is that she believes it herself—actually *believes* it. I fear she is in love with the man.” He broke off with a gesture of comic despair, and turned expectantly to Mansonby. “Excuse me, old Beast-Man,” apologized Mansonby, with a tantalizing smile, “but you erred in several important particulars. Firstly, being aware of the important oversight you had made in telling your joke, while at the same time Marlin was swearing at something Ventrosino had cursed about regarding something which old Denda had told him about an old mooted point of astronomy concerned in an investigation relative to the solution of a problem involving the—”

Ello-ta threw up his hands. “Help! Help! I surrender at discretion! Only spare my life!”

The detective held up a determined hand. “You shall not escape! I insist on showing you your error, my dear Zah. You might be tempted to tell it again and I absolutely *insist*—”

SIGNA LATOURELLE broke in with a laugh. “Stop it, *mon ami*! Stop it. I command you. You mean you do *not* insist, not when your Signa wants to speak of something else—something—Oh! something so interesting—something so—you do not insist at all, do you now, *mon vieux*?”

Mansonby kissed her. “No, sweetheart, I don't insist. Never thought of such a thing. If I said—”

Signa stopped his mouth with a soft, white hand. “Whoosh! Stop it, I say! Help, my dear Adrienne, and Therma. *Vite! A moi! A moi! mes cheries.*”

The fair Adrienne had leaped up to join in the frolic, her eyes snapping and shining with mischief,

when the instrument spoke—not in words, but in the insistent, penetrating, clarion voice of distress.

... ——— ... ! ... ——— ... ! it said. ... ——— ... ! many times repeated, but unsigned.

They all understood and there was an instant hush of expectancy. Every one froze in the attitude occupied and every breath was held tensely. In a moment the voice of Marlin, Mansonby's chief New York operative, came through. "S O S, Chief! It's from the outside. Seems to be something wrong somewhere. I don't get any signature, but—just hold hard a moment, and I'll have it located. Just a minute, Chief."

Mansonby snapped on the television, and the entire party could clearly see on the screen the interior of his private office in New York. They saw Marlin leap to his desk and press a button, give a terse direction, then fly to the land phone for an instant. What he said into it they did not get clearly. With a nod, he banged up the disconnect, and turned to another. They saw Martin, then, one of Mansonby's most valued assistants, rush into the office with a look of concern on his face. Marlin held up a hand for silence while he completed another connection; then—"Martin! Quick! It's from the outside, but there's no signature. Get the Major Observatory and have the directional put on it before it stops coming! Ask Ventrosino, or whoever you can get hold of, to find out what it points at. Hurry, Martin, the Chief's waiting for it!"

... ——— ... !! ... ——— ... !! ... ——— ... !!

"Just a minute, Chief," said Marlin, as he jabbed at another call button, swung around to another phone into which he barked a few staccato words, the while writing hastily on a small pad at his hand. Another assistant hastened in, and Marlin handed him the paper, making some hurried explanations as he dashed out.

In a short while Martin was back.

"Ventrosino says it's Ceres, Marlin. He says that—"

The rest was lost to the party at Passawamp. Zah Ello-ta lurched to his feet, his face white. The Cereans were his own people, his relatives, the loved friends of his infancy, adolescence, manhood. There were gasps of horror from the women. Mansonby and Sanderson alone remained calm.

"Sanderson," said Mansonby quietly, "have the aerocar made ready, will you please, and get the women in? I'll be with you just as soon as I—"

... ——— ... !! ... ——— ... !! ... ——— ... !!

THAT was all that had been coming. Then there were some jumbled sounds, followed by a pause; and then, clear and sharp, as if the sender had rallied the ultimate atom of body and soul and thrust it into that one last fierce savage cry: "Jupiter! Jupiter! Jup—"

And then only silence, unbroken and ominous, as if palsied had been torn ruthlessly from broken instrument—forever.

Mansonby turned back to the machine and spoke incisively, rapidly. "Ready, Marlin?"

"Yes, Chief. Let 'er come," replied Marlin, reaching up to start the sound recording wire into operation, drawing its receiver closer, and connecting it with a duplicate of the receiver at which he listened.

"Have Martin ask Ventrosino to chart for us the present precise location of Ceres in relation to Mars and both in relation to Jupiter, and then their relative positions each week for, say—a month to come. The ship we were to use for our little excursion will do, but it's

only one, and there's no time to fit out others. See that it's made completely ready at once. It's now three p.m., Marlin. We start for Ceres to-night unless something else comes through to change things. You'll have to hurry. You're to go alone, of course. Put Martin in full charge of affairs and you drop everything but this. Notify all those who were going with us on the excursion to be on board ship not later than—"

"I'd say midnight, Chief," suggested Marlin.

"Yes, Marlin. That's right, I guess—midnight. Get Maltapa Tal-na on the interplanetary at once and tell him all about our plans. Have him get five of his best ships ready, equipped and manned and ready to jump on the minute. I'll let him know later whether he's to meet us on Mars or elsewhere. Depends on what Ventrosino's charts show. Maltapa'll know what to do. He's probably already got old Denda busy on Jupiter, and environs. Just mention it to him, though. Tell him to send in full reports every hour. I want five hundred men—the very cream of his men, and I want both men and ships fitted out with everything there is. If we've got to fight Jupiter, which seems likely, we're liable to have one hell of a fight on our hands. And we're totally in the dark as to what we have to fight. I can hardly believe yet that Jupiter's inhabited. Nobody ever dreamed of such a thing before, but it looks like it, though it may be a mistake. Word 'Jupiter' in the message might mean a lot of things. But we've got to assume that some people, or some things, from Jupiter, have attacked these poor old Cereans. Found them easy meat, of course. Naturally, they're old and more or less helpless, and wouldn't have been expecting anything. That's all for now, Marlin. I'm coming in as fast as an aerocar can bring me, and I'll arrange about the personnel of our ship and for a first and perhaps a second Martian reserve fleet to follow later. Any questions?"

"No, Chief. All O. K. I'll have to hotfoot it. Anything else? All right, then, g'bye, Chief."

"O, Marlin: Of course you'll tell Mars to make proper reply to the Cereans—in case there is anybody there to get it—and to keep trying them. They're probably in better position to follow that up than we are."

"Of course, Chief. I'm already trying from here, but no success as yet. Hello! Here's Mars coming through now. Want to listen in?"

But Mansonby had already switched off and was hurrying to the waiting aerocar.

\* \* \*

IN the swirling blackness of a savage midnight storm, Mansonby's ship left Earth, slipped up through the atmosphere, gathering speed rapidly, and swept off with the speed of a bullet on the first leg of the fateful voyage—the 50,000,000 miles or so to the meeting place with the Martians. The position of the planets involved was such that to have gone to Mars first, then to Ceres, and afterwards to Jupiter, would have meant going out of their way many millions of miles, and Maltapa Tal-na and his fleet of Martians had been instructed to meet the Tellurian ship at the point of intersection of the orbit of Mars which a line between Earth and the point Ceres would have reached in the time it would take the fleet to travel to its orbit.

The first leg of the voyage to—what? Mansonby could not say. No human lip could tell him much about what he might meet on Jupiter. Jupiter had been thought uninhabited; uninhabitable; still in the throes of evolution. At all times the face of this enormous planet was covered with a heavy veil of vapors; constantly shifting and swirling on account of the extremely rapid rotation of the planet. This veil had never been pierced

to any extent. It was known that at least a portion of the planet was in an unstable state, from the fact that the equatorial belt revolved at a slightly different rate of speed from the rest of the planet. The thought of there being any spot in that place of dire cataclysms "where foot of flesh could rest, or human hand take hold," had long been banished. With its spouting flames, its seething hot vapors, its unknown poisonous gases—no doubt accompanied by terrifying rumblings, roarings, and quivering banshee wails and shrieks, it might be a fit abode for fiends from the pit; but for a human being—

And now—Jupiter inhabited! Incredible! Inhabited by what? What sort of life could exist there? Should they have to contend with some grotesque, horrible, misshapen caricatures of things? Perhaps human, half human, or horrible beasts; perhaps some sort of devilish elementals! The Giant was eleven times the diameter of Earth; nearly 1300 times as large, and although lighter in composition, its gravity would be tremendous. A man weighing 154 lbs. on Earth would weigh nearly 400 on Jupiter; the lightest load would be formidable on Jupiter; the slightest obstacle would present difficulties; the slightest fall be fraught with peril.

All these and many more difficulties Mansonby was already wrestling with. Sanderson must work out some sort of repulsive appliance which could be worn, to overcome the handicap of the added weight, which would make them too slow and clumsy for the swift mobility which might be needed to cope with the unknown enemy.

Well, it would be largely guesswork. Much of it must wait until they set foot on Jupiter (since it now seemed they might do that unbelievable thing) and came face to face with its inhabitants. Of whatever features or form, they must be of a certain advancement to be able to navigate the ether, simple as this had become to "humans." They must have some sort of facilities for observing the heavens, else how had they known there were people on tiny Ceres, so many millions of miles away?

The passengers on the great ethership saw the Earth drop away below them, dwindling as it fell, until it became a great black globe, then a dark ball, rapidly decreasing in size. On leaving the gravital pull of Earth, the artificial gravity generators were placed in operation, so that, instead of floating about between floor and ceiling, they could walk without embarrassment, weighing the same as on the floors of their own homes. Long ago they had entered the withering cold of primordial space. But the vacuum surrounding the ship stripped it of its terrors, and the perfect diffusion of warmth from the modern atomic furnaces made the ship a place of comfort at all times.

MANSONBY had not wished to take any women along. But neither Therna Lawrence, nor Sigma Latour-elle, nor the fascinating Adrienne Lacoste, was of the sort that could be made to obey at will. Their mates were going forth to meet the unknown and vanquish it. They would meet perils of a hundred kinds—very possibly some or all of them find death. Very well, then, they were the mates of these men. They would go, too. They would see about these dangers and possible deaths. Who knew what a woman's hand might do? No! No pleading or cajoling or threats could move them.

Of the four other women on board, one was the wife of Joshua Larkin, a well known astronomer, whose services Mansonby required at hand; another was the brilliant young woman scientist Professor Melba Kasson, whose interest lay in the possible exploration of Jupiter; the other two were visiting Martian women whose

mates were sure to be with the Martian fleet, and who were endowed with devotion and determination similarly to the Tellurian women.

The Tellurian women saw little of their mates. From the first each was practically *incommunicado*. Ello-ta, himself a scientist of great astuteness and learning, had for years before coming to Earth from his home on Ceres, been working on his fondest hobby—the perfection of what he called his telepath or thought radio. For many years so-called telepathy, or thought-transference had been known to be possible, and gradually approached the standing of a science. In isolated cases thought was sent and received with great faithfulness. In other cases the success was only sporadic or imperfect. Something was lacking.

On his arrival on Earth, Ello-ta had set to work in earnest to supply this lack. He believed that since even the common radio waves could not be picked up by the unaided senses, except in the cases of a few super-sensitive beings, it was not fair to expect more of the much more rapid and delicate thought-waves. He had, therefore, decided to build a thought-radio—transmitter and receiver. By slow degrees his telepath had shown increasing sensitivity to thought-impulses, and he had known that his major problem was solved. The rest was mechanics. He could now have any person direct his thoughts into the sending appliance, and receive them in his own brain when he was within the effective range of the receiver—but with certain limitations. His present efforts were directed to putting his achievement on a more solid and practical foundation.

So Ello-ta was seen little on the voyage—almost not at all, except by his mate, the fair Adrienne, whom he used constantly in his experimentation.

Little could he know how greatly his invention was to aid them at a time of the direst peril.

Sanderson's attention was divided. Studying the functioning of his newly improved aerolite protectors took some of it, and a score of scientific problems connected and unconnected with the venture consumed the rest.

One of these last matters upon which he had for some time been engaged with assistants was a far-flung survey of the newly-established system of interplanetary "way stations."

About two years before, a collision had occurred in the ether between two interplanetary ships heavily laden with passengers. Owing to some mysterious disturbance of the ether, the ether compasses had been put out of adjustment, permitting the vessels to deviate from their courses. The same phenomenon had disarranged the "finders." The result had been a collision, head on, at a combined speed of 200,000 miles an hour. As can readily be imagined, there was little left of either ships or passengers.

In order to prevent a repetition of the tragedy, the interplanetary traffic authorities had immediately ordered the placing of "way stations" every 10,000,000 miles in the ether along the established routes of travel. These stations were equipped to send out continually automatic cipher signals which would notify approaching ships of their exact position with regard to their courses. One signal showed them that they were on their course, which meant not more than 50,000 miles on either side of it. If they had deviated more than 50,000 miles on either side, other signals told them on which side their error lay, whereupon they swung back until they again received the signal "on course." No ship was permitted under heavy penalties to pass to the left of a station.

These way stations consisted of specially designed etherships, constantly altering their positions to re-

main upon the changing routes on which they were stationed.

LATTERLY certain vital supplies which might require replenishing on passing ships, were kept at these stations; and a plan was only then being considered for the operation of "local" ships traveling between designated planets and the most convenient way station. For example, if a ship were bound from Mercury to Earth, containing passengers also for Mars, at a time when Mars, though on the same side of the Sun, would be far to one side of the route between Mercury and Earth, those passengers might disembark at a designated way station and take a local ship on to Mars. Or, if a passenger had embarked from Venus for Earth, and wished to change his course to Mars, he could, under like conditions, disembark and take a "local" ship from the way station directly to Mars, thus avoiding going many millions of miles out of his way. In this manner it was expected that a vast amount of expense and time would be saved.

It was also thought that these way stations would be of convenience in the banking service, by facilitating the quick movement of shipments of enormous quantities of interplanetary currency to settle balances. Since the notable recent robbery by which over a trillion and a half of dollars had been taken, these shipments were forwarded under heavy guard. The Mansonby Interplanetary Service had performed one of the most brilliant and daring exploits of its career in running down the robbers and recovering all but a few paltry hundreds of millions of the loot. The depredations of these interplanetary criminals, or "hijackers," as they were called for some unremembered reason, had been dealt a severe blow.

The routes of these "local" ships would be, as a matter of course, constantly changing to fit the varying positions of the respective planets, and regular lists of their routing would have to be made up and posted months ahead by observers employed by the transportation companies for the purpose.

It was also planned to establish "boosting," or relaying, plants on these ether stations to pick up messages between the planets, and so amplify them that they might be received with greater facility and accuracy. In fact, there were so many purposes being found for these stations, that it was astonishing they had not been thought of before.

Marlin was kept at Mansonby's side most of the time, where his shrewd penetration, and his valuable learning in the more practical phases of the service, were a constant help and comfort to the great detective in the multiple problems with which he had to deal.

The position of the four planets involved in the present voyage was found to be for the most part favorable. This position depended upon their proximity to a line drawn from Earth to the point Jupiter would have reached in his orbit in the length of time which would be required to pass from Earth to an intersection with the line of that orbit.

Mars had already crossed this line some time before, which simply meant that the Martian fleet would have to go back to meet Mansonby. To reach Ceres would require a swing of 9,500,000 miles to the right of the line, and then a swing of 11,600,000 or so to the left to overhaul Jupiter. But a matter of 20,000,000 miles was not serious.

The journey to the rendezvous with the Martian fleet was made in fourteen days, without incident. This was excellent time. On the former voyage to Ceres, the equivalent distance had taken twenty-nine days. The distance was some 50,000,000 miles, making an average

daily speed of 3,500,000 plus, or an average hourly speed of nearly 150,000 miles, a speed that would have been hazardous in the extreme a few years before.

The Martian vessels saluted and swung in behind Mansonby's ship, which would act as flagship of the expedition.

Maltapa Tal-na, Mansonby's giant Martian chief operative, at once embarked in a tender and boarded Mansonby's ship for consultation, and incidentally to bring aboard the same Martian pilot who had proved his mettle and skill in the former voyage.

The fleet flashed on toward Ceres.

After mutual introductions and salutations, the Martian pilot was put in charge of the flagship, and the giant Maltapa began his report to Mansonby. Present also were Marlin, Ello-ta, Sanderson, Larkin, and Kasson. The conversation was in the interplanetary tongue, understood by the educated everywhere.

"Well, Chief," began the Martian, in a voice that filled the large room and seemed to make the walls bulge, "everything is O.K. These five ships I'm bringing are the best Mars can produce, and they are equipped with every sort of instrument known to science—absolutely everything. I left home three days ago, so I had eleven days to get ready. I've had half the population of Insa Bel-qua jumping day and night."

"Insa Bel-qua is the capital of the united Quas, or peoples, of Mars," Mansonby explained for the benefit of those present who had not visited Mars. He turned to Maltapa. "All right, Maltapa, that's fine. I'll take up the details of those things with you later. What I'd like to go into right now is Jupiter. I want to get together all we have to go on about Jupiter, so we can make our final preparation as intelligently as possible. And first, has old Denda really got anything on the physical features of the planet?"

MALTAPA shook his head. "For practical purposes, Chief, I'd say no—at least nothing new. Nobody knows much about Jupiter, except that he's big and covered with clouds, as a gorilla is big and covered with hair. Denda says what everybody else would say, I guess, that it would be mighty dangerous to drop down into the clouds anywhere near the equatorial belt. It's almost a certainty that there's nothing solid there."

Professor Larkin nodded. "Surely; and there's no certainty what we would encounter if we could land. I have no doubt the whole equatorial belt is more or less impregnated with poisonous gases. It's fairly well established that these gases exist on Jupiter. We are ignorant of the character of some of them. They are unknown gases. Even our ships might not be proof against them."

Mansonby nodded. "And you're inclined to recommend, then, that we try the polar regions first, Professor?"

"Undoubtedly," replied Larkin emphatically. "Undoubtedly. A point on the equator moves through space more than 26 times as fast as on Earth, remember. The extremely rapid rotation of a planet with an atmosphere so thick and heavy would have set up tremendous air currents from the poles toward the equator, causing the polar regions to cool first."

"Yes," agreed Mansonby, "I think we'll consider that point settled. The polar regions are certainly the least dangerous, and it's only common sense to try the safest places first. Now, as to conditions we're apt to meet there: what have you to suggest on that score, Professor Larkin?"

Professor Larkin waved a courteous hand in the direction of Miss Professor Kasson. "You started to speak, Professor Kasson?"

"Well, I had nothing startling—or at least nothing new to say. A heavy gravity, of course. Dense air—possibly, but not necessarily too dense for us to breathe, though it might be difficult for the Martians—and heavily charged with vapors. Surface probably from hot to warm. Jupiter gets much less light than we are accustomed to, as a matter of course, and that condition won't be helped by the heavy vaporous clouds. Doubtless unpleasant animals, and quite likely unpleasant humans—if they are human. A few things like that, and others that follow from them."

"Yes," agreed Professor Larkin. "No doubt at all. You've made a good start; you've stated some of our troubles in a very few words, Professor."

Mansony smiled. "How about our blessings? Shall we not have any?"

"Yes, yes, Mansony—I was going to say. First, there's solid ground somewhere. The Jovians have shown themselves to be not only sentient beings, but to some extent, at least, enlightened. Doubtless they walk upright; live in dwellings; possess machines and manufacturing. I'd think it likely, therefore, that the poisonous gases do not extend to the regions they inhabit; that the unpleasant animals Professor Kasson speaks of—and I doubt not they exist—have been subjugated. I rather expect to be able to breathe their air without much trouble; but if not, we can use our own. We'll feel unwieldy, but I think that we will be able to walk fairly well."

"I'm more worried about the kind of people we are to meet," suggested Mansony, "and we can't tell that until we see them, unless we learn something on Ceres."

Ello-ta had been silent. He now spoke. "I am glad to report that I have succeeded in making a very important improvement to my thought-radio, and—"

The two professors leaned forward interestedly. "Ah, yes. I've been following your very interesting experiments, Mr. Ello-ta." It was Professor Kasson. "I can see uses for that. Pardon me. You were saying—"

"That I have been successful beyond my expectations. It is now unnecessary to have mechanical assistance on the sending end. I can pick up anybody's thoughts by means of the receiver alone, at a distance of, say, a mile or two. So if we can get within reach of their thought-waves without being discovered, it may solve many of our problems."

"And you are able," asked Professor Kasson, "to prevent the jumbling of the thoughts of different persons?"

"Oh, yes. No trouble at all about that. I've established that each person's thoughts move on a slightly different wave-length. The difference is infinitesimal, but sufficient for differentiation. It is only necessary to tune to the particular person's wave-length whose thoughts we wish to receive."

As students of astronomy are aware, there is a space of some millions of miles immediately outside the orbit of Mars which is comparatively free from aerolites and planetoids. Good speed was therefore made by the fleet over this ground. Later it had to be cut down and varied according to the number of bodies which might be encountered. The larger of these were mapped and their positions and courses known. But in spite of the efficient "finders," care had to be taken regarding the thousands of smaller bodies, ranging down from a mile in diameter to mere gravel, which could not be definitely charted or even identified by astronomical observers.

But they made the transit to the orbit of Ceres in safety, and without too alarming experiences, eventually located Ceres, and drew alongside it.

IT was apparent from the first glance that the place was deserted. There was not a vessel of any kind in

sight, nor sign of any sort of activity. Artificial gravity-generators were turned on in the ships to assist them in landing, inasmuch as Ceres, being less than 500 miles in diameter, possessed too little of its own to enable them to make a stable landing unaided. This emergency landing gravity must not be confused with that used for the benefit of the passengers inside the ships. The latter was far lighter, and centrally placed; the former a bottom or keel gravity, and powerful. The two did not conflict.

The landing was made, and a party selected to explore the habitations of the Cereans. These were, as a matter of course, underground, as the planet had no air and the cold was too great for living on the surface, being the cold of outer space.

This party was equipped, before leaving the ship, with "ether envelopes," furnishing them pressure to hold their bodies together, and air to breathe. They also donned appliances to give them weight, or gravity, sufficient for moving about on the surface with safety and convenience. But for the latter, walking would have been difficult, as a person of two hundred pounds on Earth would weigh only six or seven pounds.

From the fact that Ceres was too small to hold an atmosphere of its own, it followed that the underground dwellings of the Cereans had been kept artificially charged with air, to prevent the escape of which the walls had been covered with a special hermetic preparation.

They passed through the outer air-lock without difficulty and entered a corridor some two hundred feet long, at the end of which they came to the inner entrance, letting into the Cerean habitations proper. The great slab, weighing many tons, stood raised.

A test of the air having shown it fit for breathing, they discarded their ether envelopes, and entered—Ello-ta leading, with Mansony at his side.

They stood in the great audience hall—a vast place fully a hundred feet long by two-thirds as wide, carved out of the solid rock. Under what different conditions and with what different feelings they had entered this place the last time! The exquisitely carved tables of stone at the far end of the hall were in place and uninjured, and the stone benches were as usual, except that a few of those in the center had been overturned. The elegant tapestries on the walls, sole known relics of the ancient father people, from which all the planets of the inner circle had their common origin, were untouched. The ponderous stone slab that closed the entrance to the common dining-hall beyond stood raised, as did also the one at the right letting into the descending corridor that led to the general living-quarters far below.

There was no human being to be seen—no stay! What was it that lay huddled behind that table at the left? Ello-ta hurried to stoop over it.

"Poor old Astaro!" he whispered, as he straightened up and drew over the remains the corner of a rug. His face was strained with pain. "Poor old Astaro."

They passed through the open archway into the beautifully appointed dining-hall. All was in order, and no sign of violence.

"Come. Let us go down below," said Ello-ta to Mansony, in a taut, hard voice. Astaro was always the outer guard. Poor fellow! They were probably all down below at the time of the attack. It must have been made without any warning. They were expecting no one, of course, and no doubt the watch they kept was only perfunctory. You see, the entrance slab was raised. If Astaro had had the slightest warning, he would have closed that and they would have been safe against the whole universe." Ello-ta made a gesture of futility. "Come, Mansony, my friend, let us go below—you and

I, and Malta and Sanderson. Let the others remain here—for the present—at least.”

The four went into the long, sloping corridor, down the several flights of stairs, all hewn from the solid rock of Ceres, and came, far below, to the great circular auditorium with the network of open hallways radiating off in every direction from it. Here had been the central living-quarters of the Cereans.

The big swimming-pool in the center of the rotunda was as it had always been. The circle of soil surrounding it, set with shrubs, showed evidence of loving care. Everywhere were signs that the place was being put in order for the projected holiday visit of the dear ones from Earth, turned now into so sorrowful an event. Even the birds flew chattering about, oblivious of the tragedy that had been enacted about them.

**I**N two of the sleeping rooms at the side of the rotunda were found corpses—three in one and one in another. Ello-ta looked at their faces and hurried on without remark. All had the appearance of having been slain by some tremendous blow that had left no marks to identify the weapon used—rather as if they had been struck by a club as large as themselves.

The search of the libraries, kitchens, machinery halls, storerooms, and other places, was fruitless. There were no more bodies; nor was there sign of any great disturbance.

“They were all old, you see, Mansonby, and having been taken unaware, could put up no defense. My poor people!”

“Yes, my friend,” assented Mansonby, “but they were not slaughtered, after all; they were taken captive and carried away, so perhaps, after all, the real intention was not to kill them. We shall bring them back.”

He put a sympathetic hand on the Cerean's shoulder.

Ello-ta nodded sadly, as he turned toward the corridor leading upward. “Yes, carried away—and by a people, or a—something—who had not the intelligence to be interested in our marvelous machinery and appliances, nor in the priceless tapestries and other treasures up above.”

They rejoined the others in the upper chamber, and led the way to the outside.

Ello-ta pressed a spot in the wall and the great slab slid quietly downward, closing the place of the dead.

Not one atom of help was to come out of Ceres to forward this task of invading the planet that was as large as all the others of the Solar System rolled into one—of dragging from that place of unknown terrors the people whom they loved. The invaders had not left a single clue behind—not so much as a dropped garment—if they wore garments; no footprint that could be distinguished from the others; no small object discarded or left behind by chance—nothing. Plainly, the stay of the Jovians had been brief.

They returned to the ships and took up their journey to Great Jupiter, 250,000,000 miles away—hoping, yet nigh hopeless.

On account of the difficulties of the remaining portion of the planetoid belt, they went slowly at first, but after clearing it they stepped up their speed to as high as 25,000,000 miles per day, or the almost unimaginable rate of over 1,000,000 miles an hour. In thinking of miles per hour in the free ether, however, it must be borne in mind that the ether presents no resistance, even at high speeds, and all speeds would seem exactly the same to the travelers, unless in proximity to other objects. There would be no wind; no sensation of movement or speed.

They arrived off Jupiter on the thirteenth day, as

days are reckoned on Earth and Mars. There are no days in space, save the infinite days of God.

Experimentally they circled over the equatorial belt at a height of a few thousand miles and then went down to the outer limit of the atmosphere. On coming within the gravity pull of Jupiter, the ships had become more unwieldy and difficult to manage. They therefore descended slowly and with great caution. As soon as they were within the atmosphere they tested the heat as they went. Outside the ship the temperature was intense. In order to prove existing theories for their guidance later, they swung slowly about 15,000 miles toward one of the poles. As expected, the thermometer gradually fell. A swing toward the other polar region showed the same result.

Over the equator and for many thousands of miles on each side, there were dense, steaming clouds, extending to the upper atmospheric limit, and seeming to permeate and possess the entire body of the air, as a steam room is saturated with steam until it is hard to breathe. Seldom could they get a glimpse of what seemed the surface, and even then not clearly enough to say much about it. It appeared to heave and surge with a slow motion, as if sluggishly liquid.

These hot clouds were driven violently upward by the intense heat of the surface, aided somewhat in the upper reaches by the centrifugal force of the planet's rotation. On reaching the upper air this same rotary speed formed them into great bands or strips, parallel with the equator and in some cases many thousands of miles in width. They were constantly surging and boiling mightily, changing shape from minute to minute.

It must be borne in mind that whereas the distance from Earth's equator to either pole is only about 6200 miles, the same arc on Jupiter measures over 66,000 miles. The atmosphere of the planet was found to have a thickness of between 1400 and 1500 miles.

**T**HEY descended as near to these clouds as they could for the heat, halting a few hundred miles within the atmosphere. This heat was not felt inside the ships, because of the protective vacuums surrounding them. Tests of the air conditions were taken by a special apparatus, projecting outboard. Jupiter being some 85,000 miles in diameter, and rotating on its axis in something less than ten hours, a given point on the surface would pass a vessel standing still in space at the rate of 26,000 or 27,000 miles per earth or Martian hour. As the fleet maneuvered to the south of the equator, the Great Red Spot sped into view beneath them, and even the upper air immediately became intensely hot.

The “Great Red Spot” of Jupiter, is too well known to astronomers to require any extended description. It is south of the Jovian equator, and some 30,000 miles long parallel with the equator, by something like 7,000 miles in width. Several Earths could be dropped in bodily.

Professors Larkin and Kasson, their eyes glued to the observation glasses, were in a state of scientific ecstasy. Here was a moot point on which the astronomers of Earth had held solemn conclave for centuries. The Great Red Spot had been decreed by turns to be merely the reflection of broodingnagian fires beneath; to be the flames themselves spouting upward; to be merely colored clouds; to be—anything you will. Indeed some of the less rigidly scientific had even professed to identify it as the abode of the damned. Now, these almost fanatic scientists were to know from personal observation, the “cold hard facts.”

But the fact turned anything but cold, for it was seen that the Red Spot was caused by flaming gases, shot out with terrible force from a crater reaching

down into the bowels of the super-heated inferno beneath the surface. This great force was caused by the enormous pressure of the unstable surface. The crater was of immense extent—4,000 to 4,200 miles in diameter, as nearly as could be determined, the greater size of the Red Spot itself being the result of the fanlike spread of the flames as they shot upward, and tendency toward stratification or bandlike formation. Many similar craters were seen as the planet revolved below them, but they were mostly too small and scattered to be seen from distant planets. Certain subterranean conditions in that particular locality had favored the formation of the one great crater, instead of small ones.

But not much time could be given to abstract science just then. The prisoners must first be freed from the unknown terrors of their unknown captors. Delay might be fatal. They remained no longer, therefore, than necessary to establish conditions bearing on their future course.

The decrease of the heat toward the poles showed that those were the places in which to seek any inhabitants the planet might have, and to the intense disgust of the two professors, to whom a few human lives were as nothing compared with the establishment of definite scientific information, they left the vicinity of the Red Spot and set their course for the south polar region.

Half way to the pole, the clouds had thinned somewhat, permitting more frequent glimpses of the surface. These were as yet too fleeting and obscured to make out much detail, but at least there were heartening vistas of low ranges and broad expanse of water.

Several times they thought they saw moving creatures, but they were of such monstrous size, and the heat was still so great at a height of a hundred miles, as to make the region uninviting for a trial landing.

It was obviously wise to stay concealed until something could be learned as to conditions to be met.

Cerean methods of rendering their vessels invisible on their voyage of abduction to Earth, had not been adopted by the Tellurians, having no especial utility, as the inner Solar System had been at peace for many years, under a code of general interplanetary law, and the present voyage was undertaken too hurriedly to make any preparations of that sort.

At length, finding the air comfortable at fifty miles above the surface, and the Jovian dusk being at hand, preparations were made to land a scouting party. A few thousand miles from the pole, the planet had begun to flatten noticeably, and concealment by the thinning clouds becoming more and more difficult, they arose to a height of a hundred miles or so and came to rest.

The last observations had borne out their expectations. There were at last signs of habitations and agriculture, and moving things were of a more reasonable size. Green spots might be meadows or fields, darker green patches probably forests, and rivers appeared with defined channels. As the dusk increased, lights appeared here and there, aggregations of which seemed to indicate cities or thickly settled areas.

**M**ANSONBY selected six persons for the scouting party, besides the two handling the scout tender. Not only would a greater number be a handicap, but he refused to risk any more lives. The mission might be perilous in the extreme, and the little scouting party might itself want rescuing. The purpose was

not to fight, but merely to gather information by which to be guided later on.

Mansonby, Marlin, and Ello-ta were to go, as a matter of course; and Mansonby added Professor Larkin for his scientific learning, Doctor Cohen, on account of his linguistic accomplishments, and a man named Whitely, for his uncanny marksmanship and knowledge of firearms.

"I'm sorry, Maltapa, old man," said Mansonby to his Martian Chief, as he started to protest at being left behind. "I know how you feel, and you know very well there's not a man in the whole Solar System I'd rather have by me in a tight pinch; but—the fact is, I've more responsible work for you."

Maltapa subsided, albeit somewhat disconsolately, and Mansonby arose. "All right, gentlemen, we'll go now. Ello-ta, are you ready? Did you load your pet in?"

He took Maltapa's great paw and patted him fondly as he looked up into his disappointed face. "Maltapa, my friend, if anything happens to us, you are in full command. Use your own judgment."

After Ello-ta and Mansonby had embraced their wives affectionately, and some hands had been shaken—perhaps held a moment longer than usual—the scouting party stepped into the air lock through which the tender was to be launched, and donned the necessary equipment. There was a little solemnity, in spite of them. Plainly the women were holding their feelings in check. They knew that these men, who went forth so casually, might be going to their doom; knew that this was not one of the ordinary dangers to which they were constantly exposed, serious as those dangers might be. But they also knew it must be done; there was no other way; and they were not of the sort who resort to heroics.

The six entered the tender, closed the door, and at a sign the vehicle shot through the outer door out into space, and began settling slowly toward the surface, all lights doused.

There was still enough daylight to get a general view of the country, though, on account of the dark sky, there was little likelihood of their small boat being seen from the land. Descending toward a cluster of lights that might be a town, they saw that it was situated on the side of a low hill, the other side of which was in darkness. They landed in safety on the dark side of the hill.

Before leaving their vehicle they must know whether they could breathe the Jovian air, or whether it would literally drown them. The scout boat was equipped with a special chamber for this purpose.

Mansonby insisted on undergoing the test, declaring that on account of his constant trips about the Solar System he was nearly amphibious and could breathe almost anything.

He entered the chamber, opened the outer vent, and the air began to hiss in. Ello-ta and Marlin watched carefully, ready to assist him if necessary. But it was not, and after a few minutes, with a nod and a reassuring smile, he opened the outer door, and stepped out upon the soil of Jupiter, and beckoned the others to follow.

"Take short breaths," he instructed them. "Try to breathe with only the top of your lungs until they get a little used to it. You two who are running the boat better stay inside. Shut the door, but keep sharp watch. We will signal with our flashes if we want to get in."

He turned to those who were accompanying him. "You must exert yourselves as little as possible," he warned them. "Walk slowly. Talk as little as

possible and save your lungs for a while. You'll be all right after a little while."

The darkness had now become so dense that they could see nothing at all—get no idea of their surroundings.

"Come," said Mansonby, "let us try it a little. See if we can make our way slowly around the base of the hill until we can see the lights on the other side."

They went in single file, Mansonby in the lead, with Marlin and Ello-ta next, and the others following. Mansonby used a small flash to scout out his footing; holding it cupped in his hand.

The distance to the point where the first outlying light came into view was no more than a quarter of a mile. The light was an outdoor one, and seemed like an electric light, except that it cast a more diffused glow. It was elevated twenty or thirty feet above the ground on what at a distance looked like an ordinary pole, and lit the ground for a hundred feet around.

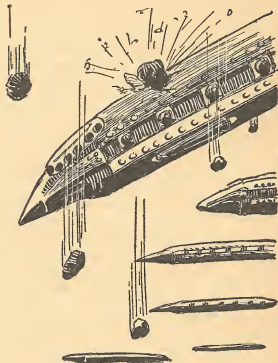
**T**HERE was nothing of interest within its range.

It was at the outer end of a circular row of lights leading around the hillside toward the settlement. Avoiding the lighted area, they came at a short distance to a masonry wall a good twenty feet in height. No buildings showed above it, and as the slope was downward, all that could be seen was the glow from the inside.

"City wall!" whispered Mansonby. "Hm-m-m. Well—that may complicate matters and—"

"And it may not," supplied Marlin.

"Precisely," interrupted Ello-ta. "Depends on



It was while definite plans of campaign were being worked into definite shape that there came down to the flag ship from the brooding mists above, a resounding crash, as if some giant force were tearing it asunder... and one of the ships of the fleet was seen settling rapidly downward, directly in the face of the cliffs.

whether we can find an entrance, and finding it, get through."

"Sh-sh-sh!" warned Mansonby. "Careful about your voices." And after a moment, "Wait here."

He went forward to the wall and along it to the left toward the nearest of the line of lights. At the edge of the pool of light he paused to look and listen, then walked boldly up to it. It was supported, on an artificial stone pole. Not far below the lights was a footpath, which he followed back to the wall, examining it as he went, then returned to where the others waited.

"There is a footpath beyond that row of lights, and where it comes to the wall there is a doorway about seven feet high, with a solid iron door sliding up in a groove inside the wall, and—"

"Don't tell us it is raised, Chief!" exclaimed Marlin with a grim chuckle.

"That's it, Marlin!"

"Looks bad, Chief—Oh! That path?"

"Nothing. Packed too hard. Not a thing—except that it's only about two feet wide, and not worn deep into the ground. No sign of any writing or characters on the light pole or the entrance to the wall."

"And the soil here seems like any other soil," suggested Ello-ta, following up the line of thought.

"I'm going through that door," announced Mansonby.

"So am I," said Marlin with finality.

"All six of us," declared Ello-ta.

"No. Not all six of us, Zah—only five."

Surprisingly enough, the quick-thinking Cerean assented at once. "Yes, I see. You're right, as usual. I'll go back to the boat?"

At Mansonby's nod, Ello-ta hurried away, as hurrying went under the weight of the greatly increased gravity.

"All right," whispered Mansonby, "come on."

The door in the wall gave into a passageway five or six feet wide by eight or nine high. Its length they could not tell. They entered close together in single file, Mansonby ahead, and Marlin close on his heels, in his usual rôle of protector of his beloved Chief, for whom he would have gone to death joyously. Except for the slender light in Mansonby's hand, the corridor was inky black. Twenty feet from the entrance Mansonby stopped with a suddenness that brought him forcibly back against the hovering Marlin. The violent contact with the heavy body of his assistant threw him forward again, causing him to tread on the thing he had sought to avoid—a wide metal plate extending entirely across the floor of the corridor. Instantly they heard a sound behind them. The exit door had closed!

They were neatly, and as they were to learn, very effectually, trapped in the corridor.

Marlin was remorseful, but Mansonby never fretted about what could not be helped. "Don't worry, old man, it's quite all right. Probably the best way. Let's see what is farther in."

They went on, treading boldly now on the plate that had trapped them. Shortly the corridor widened into a room fifteen or sixteen feet square. Along one wall was a rough wooden bench over which burned a dim light—of what kind they could not tell, as it was hidden by a globe of some translucent substance.

Mansonby sat down, and with a grim smile, motioned the others to do likewise. "Might as well rest. We'll take stock of ourselves and tell Ello-ta about our luck. Quiet a few moments, please."

He took from a package he had been carrying one of the helmetlike headpieces of Ello-ta's apparatus.

Pressing it snugly down upon his head, he closed his eyes and settled himself as if to sleep.

"Works perfectly," he commented cheerfully after a bit.

"May I venture to ask," queried Professor Larkin, speaking for the first time, "if you learned anything that may be of assistance in—"

"Wasn't trying to yet," answered Mansonby. "Only taking a test of it and—sort of playing with it to pass away the time." He smiled quizzically. "Ello-ta is now going to give it the real test from his end. I could, of course, have communicated with him just as well by my pocket radio. Sh-sh-sh!" he held up a hand for silence, closed his eyes, and was silent again.

"Ello-ta says," he explained after a while, "if 'says' is the right word in sending thoughts, that he has not picked up any thought-waves except our own. He will keep on trying for a while longer, and if he does not succeed, will return to the fleet for the time being. Meantime, I suggest we see what is at the other end of this corridor."

"BUT Chief," puzzled Marlin. "I don't quite see. You're using Ello-ta's invention for thought-transference. But if each of you has to wear an appliance, how can he pick up anybody not wearing one?"

"I am wearing it only to enable me to pick up his thought-waves, Marlin. It doesn't help him to get mine. He can get all our thoughts—all five of us—but not at one time. He tunes in for each one separately. Each person's thoughts have a slightly different wave-length, as I've explained before. The variance is very slight, but sufficient. But come—I'll explain more of that at some other time. Let us be moving."

Dr. Cohen spoke. "Mr. Mansonby, you do not think it best to radio the fleet about our—our little difficulty here?"

"No, Doctor, I think not. We haven't been hurt yet, or really threatened, you know. It may be these people don't know their trap has been sprung. It wasn't made for us, you know, and they may not be hostile at all. If the inner door is closed, as of course it is, we'll just have to wait till they find us and see what happens then. It will be daylight soon now, and I imagine we won't be long getting some sort of action."

They did indeed find the inner gate closed, and as they could see nothing, they went back to the bench.

As usual, it was Mansonby's keen ear that heard a slight sound; his eye that caught a movement overhead. Perhaps because something was there; for his habit of noting the smallest details had already shown him a small circular crack in the center of the ceiling, and he had guessed its purpose and was waiting for what came.

A trapdoor was opening slowly upward. But it was dark above and they could see nothing. It remained open a few minutes, then closed silently. Shortly they heard a rattling at the inner gate and footsteps along the corridor. Several people—they were quite obviously human people—were advancing toward them. They had left the door open behind them. Their visitors were a little shorter than themselves, and dark-skinned, but in no way abnormal or unusual. They wore a sort of slip reaching from the shoulder to the knee and gathered at the waist by a belt. They wore a sort of Grecian sandal consisting of a sole thonged to the foot, but no head-covering.

With the opening of the door, enough daylight entered. It was full morning outside.

One made a sign to the others to wait back a little,

and advanced alone, with his right hand held high above his head, and his left well away from his side. Mansonby went to meet him, giving the same sign.

The leader of the Jovians spoke in a strange tongue. His voice was low and cultured. Mansonby tried interplanetary, without success.

"Friends," said the detective at length in English.

To his surprise the Jovian nodded, smiled, and repeated the word. "Friends, friends." He advanced his hand and Mansonby took it and smiled. The detective beckoned Dr. Cohen forward, and the Jovian offered his hand to him, repeating the word "friends," followed by a lot in some other tongue.

"Can you understand him, Doctor?" asked Mansonby.

"Not connectedly," replied the linguist, "but he uses a word occasionally which resembles the romance tongues of the earth, and a few words that are like Martian. I'll try a few others."

The Jovian understood the ancient Martian fairly well. He asked whence they had come and the purpose of their visit to Jupiter. He knew nothing, he said, of the abduction of the Cereans. They had had nothing to do with it. None of the peoples of the polar zones molested anybody. It might have been the work of their ancient enemies the terrible Vulnos of the Hot Lands. These creatures were half human and half animal. They were fierce and cruel, but had a certain imitative facility, which had enabled them to take advantage of a number of the simpler inventions in use by the polar peoples. They kept a number of prisoners on hand all the time, and these they compelled to navigate the ether ships they had stolen and to do many other tasks of a similar nature. If the Cereans had been taken prisoner by these fiendish monsters, they might have fared badly. Prisoners taken from the polar zones, hot as their own climate was, could not endure the climate of the Hot Lands for long, and died so quickly that the Vulnos made frequent raids in order to fill their places. When at Mansonby's prompting, Dr. Cohen said he hoped they would join them in entering the country of the Vulnos to rescue their friends, the Jovian looked horrified, and said it would be difficult, if not impossible, to induce any of his people to do so under any circumstances, in such terror did they hold them. It was for protection against them that all the cities had been walled long ago. For while the Vulnos traveled in ships by compelling their prisoners to operate them, it had evidently not occurred to them to make the ships themselves a weapon of offense by landing inside the walls. They merely brought their ships down outside and attacked on foot. But so fierce and reckless had they been that the walls had not always kept them out.

HE ended by inviting the party to accompany him into the village, which was called Artana. This they were glad to do, as the heat inside the corridor was stifling.

The streets, which were from a hundred feet to as many yards in width, had no definite direction, but turned this way and that, as if to avoid the structures that appeared to have been dropped hit or miss here and there in the way. The latter, placed some distance apart, and facing in no common direction, were of one story only, with thick walls, made of a form of wood mash, mixed with some glue-like substance. This made them sufficiently flexible to be highly resistant to the violent quakes that were of common occurrence. When completed, the houses were lined outside and in with a white glazed surfacing to resist the moisture and reflect and re-reflect the scant

light. The windows were of a non-brittle substance of rather good transparency, and the roofs of the same substance, giving the fullest use of such sunlight as reached them, which was not too much, both on account of their great distance from the sun and the obscuring clouds, which existed to some extent at all times, even in the polar regions.

Ornamental trees, shrubs, and flowers abounded, but the first were kept of such size as not to shut out any of the sun's rays by their shade. Shade was not needed. Forests could be seen surrounding the town some miles away. All vegetation was luxuriant.

The middle of the streets was lined with thousands of motor vehicles of a rude sort, very small and low, and having a slanting front to shed the atmospheric pressure. These were used even for short distances. Walking was not favored on account of the gravity and the somewhat oppressive moist heat.

To a row of these vehicles their guide led them and selected two, which they entered; Mansonby, Dr. Cohen, and the Jovian leader in one, and Whitely, Marlin, and Professor Larkin in the other. The remaining Jovians of the party followed in other cars.

The operation of these vehicles was simple, yet they were powerful, traveling at a speed they estimated to exceed forty miles an hour, which was sufficient, considering the weight of the air. The car was entirely closed, otherwise the passengers would have been blown out of their seats by the powerful rush of air.

Intermediate streets at the rear of the houses were used as parking-places for the small flying boats that were used for ordinary purposes. These were somewhat similar in size and appearance to the smaller tenders in use by the Tellurians and Martians. Although it was early in the day, many of these were in the air, bound in all directions. There were no interplanetary ships at Artana, the accommodations for them being at the larger centers of population.

The Jovian said his name was Tahm Nama. The first name, pronounced like Tom, at first seemed to the visitors like a lead to a startling discovery; but the resemblance proved only accidental.

Tahm promised to explain the motive power of the cars at another time. The settlement within the walls was of three or four miles extent. The streets were paved with the same material as composed the houses, pressed more solidly together, and with glazed surface. Near the center of the town Tahm halted the car at the entrance of a large building which he said was the government house of the province or district.

On entering, the whole interior of the building was revealed to them. There was no division into rooms and no windows. Slender posts at intervals upheld the translucent roof, through which the light came. At the farther end of the place there was a platform extending a hundred feet along the wall, with a depth of twenty feet or so, and having a low bench extending half way across it. A score or so of persons sat behind desklike affairs to the left and right of the long platform, apparently engaged in various clerical duties. From time to time they talked into contrivances which the visitors took to be some sort of telephone. A number of citizens were sitting, standing, or walking about, or engaged in business with the various clerks.

ALL occupations ceased upon their entrance, and all eyes turned their way. Tahm stepped forward and struck a gong, and at once three Jovian men came up from a pit below the platform and seated themselves at the bench. Their dress was the same as the others.

Tahm Nama addressed them, repeating the substance of his remarks in old Martian as he went along, for the benefit of the visitors. He told the governors what he knew about their visitors.

He then explained to the latter that the three were governors of first instance of the province. All disputed matters were decided by them at once, and if the disputants were dissatisfied with their decision, four others were brought in at once to sit with the three, and the decision of any five of the seven, rendered on the spot, was final.

When laws were to be made or changed, six additional persons joined the seven, and if ten of the thirteen voted favorably, the proposition became law, effective upon reasonable notice.

The various provinces, of which there were many, were independent in local affairs; but matters of inter-provincial or common concern were attended to by a joint body of delegates, sitting at the general capital.

Tahm Nama then asked the visitors to speak.

Dr. Cohen acted as spokesman. At Mansonby's suggestion he told about the manner of their coming in the scout boat from the fleet above, where there were many others of their people. He repeated the reason for their coming to Jupiter, and their hope that the Jovians would help them, since their enemy was apparently a common one.

At the bidding of the governors Tahm Nama extended them the friendship and freedom of the province and asked them to land their fleet if they so desired. Mansonby told the Jovians of the great size of their vessels and suggested that a few of their small tenders land for the time being, as the town had no flying field, their ordinary flying boats being small could land wherever they wished.

This being agreeable, Mansonby took out his pocket radio, explained the situation briefly to Maltapa Tal-na, and directed him to send down three scout boats with a score or so of occupants.

The Jovians, unfamiliar with the radio, were greatly mystified, and even after explanations had been made, there was a predominant note of skepticism until the receiver was placed to the ear of each in turn, and they heard the voice of Maltapa Tal-na speaking to them in ancient Martian.

All then went outside to watch the landing of the stranger craft. The news spread fast, and the people thronged the streets.

It was then they first noticed the Jovian women. They were of the same average height as the men, though somewhat slenderer. Their features were very good, and some of them were indeed pretty. Their clothing was the same as that of the men, except that the single slip, which was of a lighter and more delicate material, was fastened about the waist instead of depending from the shoulders as with the men, and left the breasts bare. The children, of whom there were numbers, went naked, and were the more comfortable for doing so.

The three tenders, feeling their way carefully through the mist, caught Mansonby's signal, and came to rest in a cleared space in the street. From the first tender came Sanderson and Therma Lawrence, followed by Ello-ta and Adrienne Lacoste, Maltapa Tal-na with the vivacious Signa Latourelle, Mansonby's mate, clinging to his arm; then Professor Kasson, and two young Martians who were the special personal attendants and guards of Maltapa upon occasions when guards were needed.

The other two tenders were occupied by other Telurians and Martians of the expedition.

Maltapa had left his chief assistant, Norala Nam-na,

in charge of the fleet on learning that the Jovians were not hostile.

After introductions, the mist becoming almost a rain, they all went to the government house for the midday meal, the only one eaten by the Jovians. The daytime being of only about six hours' duration, this was sufficient, supplemented by light refreshment when wanted.

In the briefest time tables were set up and spread for fifty, of whom the guests were twenty-five. The others were the thirteen governors, Tahm Nama, and certain Jovian women attached to the Jovian men in some capacity of equality.

The repast was simple but delicious, consisting of various fruits, a meat like venison, roasted with nuts, and a drink like wine. The last was taken freely, being only slightly intoxicating.

The dishes and utensils were not greatly different from those to which the visitors had been accustomed. The food was served by comely Jovian girls, two of whom in particular were extremely pretty. They were Linata and Linana, twin daughters of one of the governors, named Lona, and were one and two-tenths Jovian years of age. The eyes of the two young Martians, splendid, strapping fellows, followed them continually, and this interest seemed reciprocal. The father of the girls spoke to Tahm Nama, who had places set for them beside their admirers.

No further notice was taken of the incident, the young lovers being left to their own devices. The girls of Jupiter mated at the age of a year to a year and a quarter, the average Jovian life being five or six years, and the limit being about eight years.

AFTER the meal the women were carried off by the Jovian women, the lovers went off by themselves, while Mansonby and his immediate company repaired to the House of Science. This was the place of assembly and labor of the scientific workers of the province and their pupils. Notes were compared on the advancement of the Jovians relative to other planets.

"The polarians of Jupiter—north and south"—the old dean of the House of Science, Mara Mella, was saying, "as you may know, are descended from the father people, who in their wanderings thousands of Jovian years ago, peopled a part of Jupiter, and—or so our records indicate—many of the other planets of the Solar System. Certainly they left colonies on Mercury, Venus, Earth, and Mars; but whether these were wiped out, or prospered and peopled these planets, as intended, we do not know. We have had no communication with them since the break-down of the interplanetary transit of these early peoples—at least it broke down as far as crossing the planetoid belt is concerned. Perhaps, Mr. Mansonby, you could—"

"I have no doubt you are correct, Professor Mella," replied Mansonby. "I have always said we of the Solar System had a common origin. Indeed I know, though without historical records to back me up, that it is true. The similarities of language and tradition alone prove this; also the fact that the peoples are of the same appearance and structure, which would otherwise be unlikely. We of the inner planets had supposed Jupiter still in the throes of evolution and unpeopled. Doubtless we should have gone on thinking so for centuries longer except for this incident which brought us out here to rescue our Cerean friends. While our errand is not a happy one, yet we are indeed happy to have found you and your people, which would have occurred long ago, no doubt, had not our minds been set in the belief that your planet was uninhabited."



The leader gods, flanked by their resistless guards, though bruised and torn, and bleeding, stood invincible.

"We also are happy that you came," replied the scientist cordially. "Your advancement exceeds ours; there is no doubt of that. And we hope you may be able to show us how to overcome our ancient enemies, who are forever raiding our provinces and taking our property and our women—sometimes our men, too."

"I feel sure we shall," replied Mansonby. "We mean to rescue our friends, and if to do so we must crush these creatures of the Hot Lands, we shall crush them, if it takes every vessel and man from our home planets. Rest assured of that. Until recent years the crossing of the planetoid belt was greatly feared by us. Indeed, with the single exception of the Cereans, every person who had tried the crossing had been lost. They were scientists. Not one of them ever returned. But now we can cross as often as we like."

Mara Mella smiled. "A long time ago there was a party, although I have never seen them personally, as I am too busy to travel, but a party—"

Mansonby and the others of his party sat up straight and looked at the speaker in expectancy.

"Yes, yes! A party of—"

Mella nodded slowly. "A considerable party from the Earth and Mars reached Jupiter. Their vessel was destroyed, or at least they were unable for some reason to return, so they settled down and mingled with our people. That was four or five years ago—fifty or sixty of your years. They have taught us much, but evidently many things you have now, such as your astonishing radio, had not been invented when they landed here. I do not know if any of this party still lives, but it may be so. I will ask at Kolata, the capital of the south polar region, about 7,000 of your miles west of here." He turned to Tahn Nama, who seemed a sort of general executive—a sheriff-general, perhaps. "Would you have a message sent to the capital, Tahn Nama?"

Tahn Nama started out, but Mansonby recalled him. "Where did you learn the word 'friend'?" he asked. Tahn Nama smiled and shook his head. "I heard it used once at the capital. Being a strange word to me, I asked its meaning, and remembered it, but I do not know where it came from."

Mansonby let him go.

"You are not familiar with our radio, but I see you have telephones and telegraphs. You would, at your stage of advancement."

Mara Mella nodded. "Oh, yes, for many years. We had them even before those scientists came."

An idea occurred to Mansonby. "Professor Mella, these peoples of the Hot Lands—the Vulnos: I don't quite locate them. Where do they come in? They surely cannot be descended from—"

"No. I understand you, Mr. Mansonby. You are right. They are not from the common father people. They are the inhabitants who were here when the father people came. They were never quite overcome, but were driven north into the Hot Lands, which were unfit for the use of the father people, and they were left there to themselves."

Mara Mella said these Vulnos, the dread creatures of the Hot Lands, were as much animal as human. They walked erect, were immensely powerful, and covered with hair like gorillas. They possessed a strange, crude language, made up of howls, barks, screams, and wails, and were of frightful aspect. Beasts in the matter of mating, any male took possession of any female he could muster the force to take, and carried her away to his cave or other rude shelter, where he kept her until he tired of her, or some

stronger one came and took her away from him. No offspring seemed ever to result from contact with the human females they abducted, marking them as of a separate and distinct genus, and not human at all. Even their blood was of a different chemical composition, as had been learned by examination of those slain in their battles.

Yet they were shrewd enough to see the value of the inventions of the higher races, and had enough intelligence to use to some extent what they could not evolve or make for themselves. This they contrived mostly by compelling their male prisoners to operate them for them. He had been told there were a few instances where they had been known to operate an air or other vessel themselves, but personally seemed to be skeptical about it. At any rate, they had not enough wit to achieve any advancement for their own race, if indeed they desired any. In short, while possessing a modicum of human mentality, and some human or near-human traits, they were for the most part downright animals—beasts.

MANSONBY reminded the Jovians of the urgency of their mission and was advised to go to the capital to start his campaign against the Vulnos, as Artana was only an outlying and chiefly agricultural district. This Mansonby determined to do at once, both as being more apt to get help there, and in the hope of finding some of the scientists who had pioneered the planetoid belt, or their descendants.

By this time the Jovian day was at a close, and after expressing gratitude for their reception, they retired to their tenders, not to sleep, for they could not at once accustom themselves to the short days and nights on Jupiter, but to consult among themselves and to give orders to the fleet concerning the journey to Kolata, the capital.

Tahn Nama promised to apprise them as soon as answers came to his messages of inquiry.

After some little search and inquiry, the two young Martians were found with their Jovian sweethearts, whom they were allowed to take with them to their boats, under the chaperonage of the Tellurian women.

The Jovian nights in any latitude are dark, for although this planet boasts nine moons, they are a poor consolation, being all either so small or so far away that much less light is received from them all than Earth gets from its one moon. But at the latitude of Artana, some way south of the point where the planet begins to flatten, none of these moons was visible, and the darkness had a quality that was almost tangible and ponderable.

Along in the middle of the Jovian night, Tahn Nama brought the welcome news that two of the scientists who had crossed the belt were still alive and prominent citizens of Kolata.

Tahn Nama, Professor Mara Mella, and several others of their new friends, were glad to accompany them to the capital as guides and sponsors. The two young Jovian girls were taken along by their Martian lovers, since they had already become inseparable and their parents were willing to let them go.

Next day, when the sun was near the zenith, they set out, after declining repeatedly the cordial insistence of the Jovian women that the Tellurian women stay with them.

Mansonby had desired to swing northward over the Hot Lands on the way to the capital, but decided against it on account of the presence of the women. They might encounter the Vulnos in some of their stolen ships, in which case, Mara Mella assured them,

the Vulnos would be sure to attack them, as they attacked insensately anyone they encountered.

In order to make speed to Kolata the fleet went well up to the upper atmosphere before straightening away westward.

For a space about Artana the country was agricultural and grazing, followed by stretches of forests. The forests comprised quite a variety of trees, which appeared, from Mara Mella's description, to correspond somewhat to the hardwoods of Earth. Toward the north—the country of the Vulnos—it became a dripping jungle, in which, they were told, roamed beasts of great size and ferocity.

Some way west of these forests they came to the Sea of Mamata, 3,400 miles in extent east and west, by 1925 miles north and south. They passed over to the north of its center.

The polarian country was all much alike. The axis of Jupiter tilting very little toward the Sun, there is practically no seasonal variation in the Jovian year. Crops followed each other with no other limitation than the character of the soil and the time required to come to maturity. The natural humidity dispensed with irrigation.

Many vessels were seen on the Sea of Mamata, and the Jovians said that maritime commerce was an important and highly developed branch of industry.

The capital was a great industrial as well as political center, with a population of well over a million. Owing to the limited height and wide spacing of their buildings, the city spread over some fifty miles.

The physical characteristics of the capital were the same as those of Artana, except what differences would be expected of a much larger city. Pre-advised of their coming, the population was out in force to receive these visitors from other worlds, and when the great earthships were seen slipping silently down through the clouds toward the city, the ovation accorded them was tremendous.

Guided by their Jovian friends to the landing place which had been prepared for them by request of Tahn Nama, the ships came to terra firma, where they were secured, and preparations were made to disembark. Beyond one-half of the crews, who must stay aboard until relieved by the other half, all were allowed to leave the ships.

GENERAL holiday had been declared, and the whole capital was in festal garb. The state and provincial officers were on hand to receive them.

It was to appear that the Jovians possessed a nice sense of fitness, for while Mansony and his aides, with their friend from Artana, were wondering what to do next, and why no one came forward, two men came toward them. Though elderly, they walked with a firm step and a proud bearing. Mansony moved forward a little.

"Mr. Mansony," began one, in as good a brand of English as Mansony himself could have mustered, "I have the honor to announce myself Samuel Morrison, of New York, and my friend here"—but Morrison's voice suddenly became a broken, pitiful sob, as he threw dignity to the winds, and flung his arms about Mansony's neck in a frenzy of wild weeping.

The detective's own eyes were wet as he held him to him with one powerful arm and thrust the other to his friend, who, in a shaking voice, said he was John Hudson, of San Francisco.

Not until the first tension had relaxed and introductions had been made among the members of the little party, did the Kolatans advance.

The president of the Commonwealth of Kolata spoke

interplanetary well, having learned it from Morrison and Hudson, and was able to converse on even terms with his visitors.

Such things were said as might be expected. Their reception was all that cordiality could suggest. The visit, first to the state palace, and then to the government house of the local province, the plaudits of the citizenry *en route*, and the banquet which had to be partaken of, were unexcelled and positively unexcelled. But even though there were no long speeches, and matters marched with expedition; it was evening of the short Jovian day when all had been done. Again the Kolatans endeared themselves to their guests by releasing them to go with Samuel Morrison of New York and John Hudson of San Francisco. Even Tahn Nama and Professor Mara Mella tactfully withdrew.

The loved and loving Tinata and Tinana led away their Martian lovers to the house of friends, and the other guests were cared for by the cordial Kolatans.

The loyalty of Samuel Morrison to the planet and city of his birth had caused him to teach his Jovian wife and children English, and to erect in his home so far as he could a section of New York as he had known it. Hudson, who had not taken a Jovian woman, had by all circumstances to live in the home of the only other Tellurian within hundreds of millions of miles.

Morrison's Jovian wife was a nice-looking middle-aged woman nearly four years of age, who had been something of a belle in her day. Her Jovian name of Marala he had Americanized into Mary—Mary Morrison. There was a fine American-looking daughter, Mary Terra Morrison, a year and a tenth old, and a rather Jovian son, Sama, of a year and eight-tenths old. All appeared fond of each other, and mother and children seemed proud of their Tellurian husband and father.

Early next morning there was a conference between Mansony and his aides on the one hand, and on the other the Chiefs of what may be called the Department of War or Defense, and the National House of Science. Of the former Rala was head, with Antra and Manara as aides; of the latter Morrison and Hudson, with an assistant for each branch—astronomy, chemistry, biology, and the like.

Mansony spoke first. "You know, gentlemen, our purpose here; also that we have six of the best ships the Solar System could produce, equipped with all known means of offense. It's a question only of how many and what means we can make use of against the particular enemy. We have over five hundred able fighting men. The point is, however, that we came here ignorant of the whereabouts, character, numbers, and fighting methods of our enemy—in short, knowing nothing whatever about them, or their habits. We should like to learn all we can about these."

Rala followed. "As war chief, it is my duty to know about our enemy. For your benefit, Mr. Mansony, I will explain that the territory for 50,000 of your miles on each side of the equator is uninhabitable. This comprises, as you will see, much the greater portion of our planet. To the south of this region the Vulnos occupy a band around the planet roughly 3,000 miles in width. From the Vulno country to the south there is about a thousand miles of vacant country—vacant except for small wandering bands or tribes. Our country runs from the southern limit of this 1,000-mile zone to the pole.

"This 1,000-mile zone can be practically left out, as the tribes are outcasts of a low order, do not act in concert, have taken no slaves, made no raids, and are incapable of going to Ceres.

"As to the 3,000-mile zone, the northern half is about the same as the 1,000-mile zone. The air is filled with poisonous gases, which make life hard even for the Vulnos, with their widely different physical constitution. This, too, may be left out. Roughly, this leaves a zone of, say 1,500 miles, to consider, and much of this is excluded by force of physical conditions. For example, what is known by you as the Great Red Spot cuts out a space of some 50,000 miles from east to west. None of them lives in that space, except, perhaps, a few scattering tribes on the border. This dead space is due north of Kolata, which accounts in some measure for our comparative freedom from attack, and furnishes, in some degree, the reason for our capital being here. It was formerly at Natala, far westward from Kolata. The Vulnos, being primitive, attack the regions nearest them.

"THESE Vulnos are not a nation, though the name is given to all the inhabitants of the zone. They consist of many scattered tribes, without any common ties and often warring among themselves. There are two powerful tribes, however, which might almost be called nations—the Drugos, centering about 19,800 miles westward from the 50,000 mile Red Spot Area, and the Duvolus, or Guvulus, something like 34,200 miles east of it—too far apart to war on each other. In fact, they are practically antipodes of each other.

"The Duvolus have neither the intelligence nor the aggressiveness of the Drugos, and I do not know that they have ever stolen any of our vessels, or many of our people. Compared with the Drugos, they are a peaceful people, not often wandering very far away from their homes."

Mansony nodded his satisfaction at the clear and intelligent statement of the Jovian War Chief. "Looks like it's the Drugos, then, doesn't it? That helps a lot, Chief. How many are there of these Drugos?"

"We can only guess," responded Rala with a dubious shake of his head, "but allowing for everything, I should think from 40,000 to 50,000 all told, mostly scattered over some 3,000 miles from east to west, and 1,500 miles from north to south."

Mansony nodded again. "And the character of these Drugos, their weapons, and so on?"

"Their weapons, primitive, except, possibly for some they may have stolen from us—bowlders, clubs, jagged pieces of rock thonged to handles of wood. Their disposition, as bad as it could be—insensately fierce, cruel, and savage. As to physical characteristics, they are"—he figured with paper and pencil a moment—"from seven to eight and a half feet high, as you measure, arms reaching near to the ground, and enormously powerful. I have seen a Drugo pick up two of our strongest warriors, one in each hand, crush them together, and fling their corpses twenty feet away, without apparent effort. I have seen them hurl rocks weighing 25 of your pounds—I mean rocks which would on your Earth weigh 25 of your pounds—a distance of thirty or forty feet with such force as to mow through a band of warriors, killing numbers of them. Their very aspect is such as to inspire terror. They are bad creatures to meet, Mr. Mansony. You may be sure of that."

"Sounds like it, Chief Rala," Mansony allowed with a smile. "It certainly does. I should say our attack, if we have to fight them, should be from the air."

The giant Martian chief, Maltapa Tal-na, had been showing signs of satisfaction. A half grin of pure enjoyment was on his face, and his huge hands were opening and closing happily. His lips opened to speak, closed again without doing so, and he subsided

with a contented sigh. Rala eyed him in puzzled manner.

"Chief, you must make allowance for Maltapa Tal-na," laughed Mansony, "he isn't responsible when there's a fight in prospect, particularly a bad one. He comes of a long line of fighting men, and there's been too much peace to suit him."

Maltapa looked apologetic. "I know, Chief, I know, but you don't know us Martians. Even yet, you don't know us. O, God of Mars! Give me Orala Nam-na at my side, and my good Martian lads about us, and—Ah! once more before I die, Chief—just once more and I'll die content. Let us at these Drugos! Ah, Chief, you won't deny us! You gentlemen stay here, won't you? Just let me take my own ships and my own men, and go after these babies. Couldn't we do that? We're better fitted for that sort of thing—pardon me, Chief, no offense, but—"

THE giant Martian had risen to his feet and swung his arms in anticipative ecstasy. His massive form, towering over all the others—he was seven feet tall and wide in proportion—his eyes alight with the lure of his ancient race, the lure of battle, his terrible muscles flexing and re-flexing, he was a man to have at hand when trouble came thick and fast. It was hard to think of any beings who could stand against him and his "good Martian lads."

Chief Rala looked at him almost in awe, then, on a sudden impulse, went and offered him his hand. He had chosen badly, however excellent his motive, for the great Martian seized the proffered hand, engulfed it in a cast of rigid steel, and squeezed his appreciation and pleasure.

There came a howl of agony from Chief Rala, himself a man noted through the country for his strength. Brought suddenly back to normal, Maltapa relaxed his grip and gave Rala a puzzled stare as he withdrew his crushed and broken hand.

Rala's first impulse was of resentment, but he, too, was a warrior, and after the first moment he smiled in spite of his pain, and clapped the Martian a thwack on the shoulder with his well hand. "Ah, Maltapa, friend of mine! This is worth while—to be crushed by a man like you!"

Ignoring the pain of his broken hand, Rala took up the conversation where it had been set down. "Perhaps, as you say, Mr. Mansony, the attack should be made from the air—I'm inclined to agree with you—but you understand that the Vulnos have airships, too." "Ye-e-es, Chief, but I don't see how they could be very effective, with their crude weapons; and they wouldn't be well handled. How many airships have they?"

Rala consulted Antra before replying. "Since we first began to use airships, they have stolen several hundred, large and small, but mostly small ones, holding no more than 12 or 15 persons. That is during about eight of our years. How many of them they have left now I cannot say, of course. As to otherships, which we began to use much more recently, they probably have taken as many as ten or twelve. But you understand our otherships are not so large by a great deal as yours, being used only for passing to and fro over the equatorial belt between the north and south polar regions."

Mansony excused himself to confer with Marlin and Maltapa aside, and after a few minutes said, "Chief, how many men do your ships carry?"

"A hundred easily—more if necessary."

"Can you furnish five ships and five hundred men at once?"

"O, yes," was the prompt reply, "twice as many if you wish."

"I think that will be enough. How soon could they be ready to move?"

Rala consulted Antra and Manara again. "In the morning."

"Fine! That is as soon as we could be ready, perhaps a little sooner. And now, gentlemen, we will leave you to your preparations. You will have much to do, and I have some matters I should like to talk over with Chiefs Morrison and Hudson."

The face of Father Sun, red and sullen as if angry at having to leave his couch of slumber so soon, shone luridly over the Jovian hills and forests, and stained the vessels of the war fleet a deep crimson, as they headed north and west toward the border of the Great Red Spot, turning them into blood. Blood!

Mansonby, in the prow of the flagship, shuddered deeply, hardened as he was to death and danger. Blood!

Blood of his brave Tellurians and Martians? Blood of their Jovian allies? Human blood? Or the blood of these other fierce unhuman creatures the Vulnos, who were outside the pale on whose portal God had written the word "human"; whose blood, if the venom that ran in their veins should be called blood, could endure without detriment the fierce heat of their hellish country?

Well, they would see soon enough. They must abide the event, for it was in the clutches of these unhuman monsters that their Cereans were held, and it was there they must go for them.

He gave another quick glance at the bloody globe, shuddered again, and turned away.

The fleet traveled slowly, a Jovian pilot in the chart room. The distance was not great—only 50,000 or 60,000 miles. But the steaming clouds became denser as they went northward, and the outboard thermometers went up rapidly. Only the vacuum about each ship saved them from discomfort within.

THEY soon reached the "sphere of influence" of the Great Red Spot, and tests of the outside air showing traces of unfamiliar gases, they bore away more to their left, to skirt this region. These gases might have disastrous properties. Even the outer sheathing of the vessels might not be proof against their action.

Soon the air showed clear of them, and they held their course, which was to the west by a few points north. Now they were over the 1,000-mile zone of the nomadic tribes, of which Chief Rala had told, and calculated they had cleared the gaseous territory. They saw no one below. But once or twice, flying low, they had caught glimpses of huge animals roving about or feeding along the borders of the steaming jungles.

By nightfall they were over the zone of the Vulnos, and as it was unwise to advertise their presence by showing lights before they were ready for contingencies, they came to a halt to wait for day, and make some final preparations for whatever lay in the morrow's store.

During the four-hour night, which seemed endless, they could hear frightful bellows, screams, and cries from the blackness of the jungle depth below, and several times crushing struggles as of hideous monsters locked in hideous combat.

"Be patient, my friends," Mansonby bantered them, "you'll get on the ground with those little playmates soon enough."

The rising sun was kept from sight by the heavy torrid mists of the Hot Lands, but as soon as it was

light enough the fleet began to cruise slowly westward over the super-heated jungles. They were still some way from the central area of the Drugos, but there was no knowing where the Cerean captives had been taken.

They now flew a thousand feet or so from the surface, scanning it carefully with powerful glasses, and taking no pains to conceal their presence. They were ready, or so they thought, for whatever might come against them. So they thought!

"Let them see us! They might as well see us now as any time," beamed Maltapa Tal-na. "If they feel like bringing out their ships, let them come along with them."

With his big assistant, Norala Nam-na at his side, and his "good Martian lads" ready to act at a moment's notice, he waited with gleeful impatience, from time to time giving his cohorts a promissory grin.

In a little sound-proof and vibration-proof room at the bottom of the flagship, among his almost infinitely delicate instruments, receiver on his head, sat Ello-ta the Cerean. He still shook his head and frowned.

But they were not to remain long unnoticed.

They were approaching the habitat of the Drugos. Already they had caught fleeting glimpses of small bands that Chief Rala assured them were Drugos, and heard new sounds drift up to them that he said were their conversation.

A voice would start on a high, doleful note, like a hound baying the moon, breaking off sharply, to be continued again and again. Lower in pitch, after a brief interval, would come the answer, quivering like a pain-racked soul in torment, to rise on a shrill screeching ladder of tone into a demoniac scream, and sliding back down to a banshee wail, which made the blood turn cold and the breath abate.

The snarl and bellows of the great jungle beasts spat back their defiance at these voices that were—to them—human.

Followed a series of short, sharp-cut, high-toned yelps, weirdly suggestive of hounds from the pits of some unknown and unimagined inferno, overlaid by some other Drugo citizen with the hoarse, choking cough of the lion, relieved against the snapping, yipping, rolling howl of another.

There was silence in the large room of the flagship which was Mansonby's office. Gathered around him were Rala the Jovian War Chief, with Antra and Manara; Marlin, silent, but calm, capable, and unafraid, watching over his beloved chief; Maltapa Tal-na, with the huge Orala at his side; and by no means last, Calder Sanderson, the famous scientist, that had made their presence there possible by his outstanding achievements. The pick, these men, of the three worlds from which they came, the last words of Earth, Mars, and Jupiter in capability, resourcefulness, fearlessness.

Manipulating his instruments at the bottom of the ship, receiver on head, brow knitting into an expectant frown, sat Ello-ta, the greatest of the Cereans.

SUDDENLY his head jerked up, disarranging the crownlike headpiece. He reached up and readjusted it with meticulous care, touching it gently with the steady sensitive fingers of his left hand to get the precise tension of contact. His right hand had gone out to press the button of the ship's telephone leading to Mansonby's office above. He held it poised there a moment, then gave a quick downward jab.

Instantly came back the voice of Mansonby. "Yes, Zah?"

"Come down, will you—quickly—alone?"

Ello-ta motioned him in silence to a second headpiece, connected with the same instrument. Mansonby adjusted it carefully.

After "listening" a moment, he in turn pressed the telephone signal, and was answered by Marlin.

"Note this spot so we can return to it, Marlin. Tell the pilot to do the same, and have him cruise over it in circles of two or three miles. Have Maltapa and Rala order their contingents to stand above and away in formation, but keep in touch. That's all."

The flagship began to circle, and the other vessels dissolved into the mists.

Mansonby and Ello-ta sat as silent and motionless as if carved of wood or stone.

It should be repeated here that Ello-ta's thought-transference machine, or telepath, was nothing more than a delicate appliance for picking up and amplifying the almost infinitely short waves upon which human thought travels—amplifying them to such a degree that they would impinge upon the mind of the person desiring to receive them; somewhat as the radio picks up from the ether impulses which could not be caught by the unaided human senses, and translates them to the senses—brings them within their range.

A detailed scientific explanation would merely burden this relation with a jungle of technical terms, beyond its space or purpose. Briefly, the thought waves emanating from the mind of the thinker were taken into a complex receiver, attached to which was a network of small tubes containing gases of different kinds and density. Upon these the thought waves acted through the medium of sensitive diaphragms, automatically selecting and actuating the one which was appropriate for the particular wave. The reaction through the gases so selected was passed on to an electric amplifier, which stepped it to the proper point for reception in the headpiece worn by the "listener."

No words were received, but only thoughts, which do not necessarily mean words, though they may if the thinker is concentrating upon a word. But in most cases they came in pictures—mental pictures.

What had come to Ello-ta through the medium of his telepath was not words, then, but pictures of such things thought about by the thinker as could be received as pictures. Thoughts upon abstract subjects, reasoning upon abstract themes, could not be received at the present development of the telepath, because they could not show themselves as pictures.

If a man were thinking ardently of his sweetheart, a picture of his sweetheart would be received by the "listener," and that picture would show her, not as she actually was, but as she had seemed to him. If he thought of her in her home, her home would be added to the picture, clearly or vaguely according to the prominence in his mind; if riding in his aerocar, the aerocar would appear; if living in the dream cottage with him, the mental screen would show that delectable haven. These thought pictures when tensely or clearly formed in the mind of the thinker, reached the "listener" with astonishing clarity and detail.

But if the thinker were merely reflecting how desirable it would be to understand the character and properties of the fourth dimension, or the Einstein theory of relativity, or the descent of man—nothing would register on the mind of the "listener," probably, which could be interpreted, or at least only such incidental pictures as might be formed by the thinker in his processes of reasoning.

DURING the voyage to Jupiter Ello-ta had devised an improvement by which certain moods, or thought colors, would register on the mind of the "listener"—such as intense happiness, sorrow, dejection, love, hunger, and the like; and this was of material assistance in interpreting the mental pictures. It had been his hope to bring the telepath to the point where all thoughts, concrete and abstract, could be received perfectly; but this he had not yet been able to accomplish, although he felt that he was nearing it. The difficulty here lay in the fact that a chain of events which had gone before might have put a given person into a condition of, for example, intense grief. The mood might remain for days or weeks or even years afterward, without the chain of events ever again passing through the mind of the sufferer in anything like connected or logical order. In such a case the "listener," by the use of Ello-ta's improvement, would be impressed with the mood or feeling of grief, but without knowing from what it emanated—without knowing the cause of it. The telepath had not yet the power to catch those light and transitory thoughts that flash through the brain so casually and superficially that the thinker himself is scarcely conscious of them—as if any sound-recording device had received the impression with insufficient depth to make a reproducible impression upon the recording material.

Ello-ta received, then, not words, but the mental or thought pictures builded by the thinker, or, at most, the moods or shades of thought into which a sequence of events had plunged the thinker.

There had come to him first the picture of his old home on the tiny planet Ceres. This notified him instantly that he was in all likelihood receiving the thought of some Cerean. He had reached, then, for the telephone. But his finger had been stayed by the realization that his own thought might have intruded. Next had come the image of himself, the leader and head of the Cerean people—clearer and more detailed, he knew, than one could form of oneself—an image that showed himself in part as he knew himself, but also in part as a person in some vague way foreign to himself.

This had made him jab at the button and summon his Chief.

The next picture, coming to them both after Mansonby had donned the headpiece, clear-cut and unmistakable, showed the Cerean prisoners huddled together in terror in the depths of a dark cavern.

At that point Mansonby had issued his orders for the deployment of the fleet.

The flagship was circling over a saucer-shaped valley of forty miles diameter, rimmed by sheer rock cliffs of some height, from the top of which stretched away broad tablelands. The central floor of the valley was occupied by almost impenetrable jungle, from the depths of which shimmered heavy clouds of stifling hot vapors. Toward the edge, where the ground began to curve upward to meet the talus of the cliffs, the jungle thinned and fell away, leaving a barren territory of a half mile width. Although none too wide for the maneuvering of the fleet of great etherships, it would serve as a landing place, if landing they must make, which seemed likely in the event. This rim of land between the jungle and the cliffs was the only place in the whole extent of the valley where a landing could be made.

Spaced widely from place to place in the face of the encircling cliffs, hidden away in dank caves, were the comfortable homes of the Drugoan Vulnos. Somewhere in this honeycomb of cliffs were the captives—exactly where, the rescuers did not know.

Ello-ta's telepath had, indeed,—indicated in a broad way the westernmost section of the rim of cliffs. It was, therefore, to this locality that Mansonby and his aides attended.

**I**F the Drugos had any of their stolen vessels about, no trace of them could be seen. The Drugos, on discovering the presence of the fleet, whether or not their mentality extended to guessing the reason of its coming, retired to the base of the cliffs, and awaited developments, expressing themselves in a demoniac converse of howls, yelps, yips, and snarls.

Ello-ta had failed to pick up any trace of Drugoan mental processes. Were their animal thoughts—if they had thoughts—carried on some weird, infernal current outside the power of his machine—too long in vibration for it to act upon? Were the mental processes of these beast-men, or man-beasts, too little organized and cohesive to come within the pale of "mind"—too primitive and sluggish to build those mental images of a character or clarity to register in a human mind? Or were they savage mental pictures such as, received by a human mind, were not to be recognized or understood?

Ello-ta attacked the puzzle in vain, as he turned his instrument up and down the range of ultra-vibrations, "listening" intently the while.

The Drugos had as yet made no sign of taking the offensive. Indeed, as even their brutish minds might possibly have seen, there was no offensive to be taken against vessels in the air, unless they could meet them there.

Suddenly a cry arose in the flagship that strange vessels were arising from the back lands of the plateau above the cliffs. But whatever apprehension may have arisen from the discovery was dissipated quickly on noting that the ships appeared to be making away from the scene as fast as they could go. They were soon hidden in the low-hanging mists. Were they hastening off to gather other hordes to their help? Or were the leaders of these Drugos, frightened at the prospect of fighting so large a fleet of superior beings, equipped, perhaps, with weapons of mysterious power and deadliness, making the best of an early escape to save their bestial hides, abandoning their less fortunate brethren to capture or annihilation?

The latter seemed likely, and such attention as had been drawn away by their flight, came back sharply to the rescue of the prisoners, now apparently simplified by so much.

It was while definite plans of campaign were being worked into definite shape, that there came down to the flagship from the brooding mists, above which the fleet had retired, a resounding crash, as if some giant force had seized upon a vessel and were tearing it asunder. And in the startled hush that followed, one of the ships of the fleet was seen settling rapidly downward, tilting at a sharp angle directly at the face of the cliffs nearest the flagship. For a minute it seemed lost, as the pace at which it was approaching the rocks would plainly be fatal to vessel and crew.

But at the last moment its pilot, seeing his peril as he emerged from the clouds, regained some measure of control, swerved away from the rocks, describing a sharp circle, and calling upon his engines for their expiring atom of power, swung up slightly to avoid smashing its nose into the ground, and came to a grinding, screeching stop at the very edge of the jungle, ripping away its bottom sheathing for hundreds of feet as it did so.

The Drugos had scored, and heavily.

Their beast minds had had sufficient human shrewd-

ness to load their ships with bowlders, rise into the concealing mists above the fleet, while pretending to run away, and roll their rocks overboard by the hundreds. Primitive, crude, hit-or-miss, but—effective. But for the uncertainty of their aim, due to the clouds, it might easily have been fatal—the entire fleet might have been wiped out before even striking a blow, and the prisoners be irretrievably lost—as well as the rescuers. It was something like a powerful but unskilled fighter attacking a skilled boxer, with the result that the boxer is put to rout. And such is the beauty of simplicity that unless their vessels were destroyed, and promptly, there was nothing to prevent them from repeating the maneuver as many times as they could speed away in the safeguarding veils of vapors, reload, and return to dash upon the stranger fleet another barrage of bowlders. A bowlder precipitated from a height of a mile, or even less, would shear its way through any airship that could be constructed, especially considering that a rock weighing 150 pounds on Earth would weigh on Jupiter nearly four hundred pounds. Enough hits would reduce the fleet to shapeless, hopeless wrecks, peopled by corpses.

And where were the aggressors who must be destroyed? Somewhere in the all-enveloping clouds! Anywhere! The planet was over a quarter of a million miles in circumference. The air was 1,500 miles high. True, the allied fleet could easily attain safety in flight, but—there would remain the captives.

In some way these unfortunates had learned of the disaster, for Ello-ta now caught in his telepath his own image, as he had seen it before; then that of a wrecked ship; then of a whole fleet of wrecked vessels; and lastly, the despairing faces of the captives in their prison caves.

**A**ROUND the ring of circling cliffs the Drugos howled their joy.

Fortunately, the radio of the fallen vessel had not been struck, and details of the misfortune were coming in. One rock had bored a gaping hole through the upper works, and cloven its way downward far into the bowels of the ship where the machinery lay, but had not gone out the lower side. Smaller ones had punctured the ship in many places, admitting the heavy Jovian air, but there was no breach as yet through which the enemy could enter. Of the fifteen engines, nine had been put out of commission, for the time being, at least. Eleven of the hundred on the ship were dead, and several badly or slightly hurt. It was found that the remaining engines had not enough power to raise the vessel from the ground.

The Drugos were mustering in dense masses at the base of the cliffs, forming a semi-circle. Plainly they were getting ready to rush the disabled ship, in the hope of capturing it. In the neighboring jungles the hoarse voices of the mighty beasts, disturbed by the crash of events, formed a demoniac background to the discordant yells of their more nearly human fellow countrymen.

Mansonby was not idle. Ordering the other ships to circle swiftly to avoid further missiles from the sky, he instructed the crew of the fallen vessel to keep their ship shut up tight and remain within.

"Marlin," he said, "if I dared use gas here we could flood those fellows with poisonous gases and end it like that." He snapped his fingers. "But we'd kill the poor devils in the wreck there. And, besides, we'd be pretty sure to kill those poor old Cereans. We're too near the cliffs, and there's a powerful upward current of air, and it would be almost sure to



sweep the gases up the cliffs and into their caves. I dare not chance it. We'll have to use other means."

At Mansonby's side Maltapa-Tal-na awaited his moment, his face alight with unholly anticipation, one great hamlike hand clutching Norala's arm, until even that mighty arm went numb. Under his orders the Martians were preparing for action. This preparation consisted of putting on an envelop not unlike an ether envelop in appearance, but with widely different purpose. The headpiece consisted of a high metal helmet so made as to take up the shock of heavy blows. Inside this was an aerator which so thinned the heavy air that the men were able to breathe the air reduced to the same consistency they were accustomed to. This was essential, particularly in the case of the Martians, whose atmosphere was much lighter than even that of Earth. It would be impossible for them to undergo the strain of heavy hand-to-hand fighting under the handicap of the Jovian air. Sanderson had attended to that. A special diaphragm at the mouth avoided interference with the voice.

Another feature of the envelop which the Martians were hastily donning was an anti-gravitational charge. It had been known for many years that the force known as gravity was electrical in its nature, and scientists had long dreamed of being able to construct an appliance which, by setting off positive against positive, would reverse the effect of gravity, by setting up a repulsive force in place of the attractive one resulting where positive and negative were allowed to meet. This had been accomplished at last, partly through Sanderson's suggestions, and partly by his fellow scientists.

By the use of this principle, a Tellurian landing on Mars, where the gravity was very much less, could so gauge his gravity, or weight, that he would not be inconvenienced. His weight could be increased or diminished at pleasure. The invention had not yet reached the stage of application to large bodies, such as ships.

The rush of the Drugos began, their semi-circle converging to surround the vessel they had brought down, emitting their infernal chorus as they came.



It was checked quickly, and the Elementals were struggling away back to their infernal homes somewhere in the fierce regions toward the north. As the last one disappeared over the rim of the valley, Mansonby sprang into swift action.

They ran, not with smooth strides, as a man does, but with great bounds of eight or ten feet, the power of their legs sending them over the ground with surprising rapidity. In each hand (they had hands and not animal paws) was clutched a rock or a club, which their long arms could fling or wield with deadly precision and force. Their height of seven and eight feet, and their powerful shoulders, gave them a look of resistlessness, while their bristling hair, lidless eyes of smoldering red, and open mouths, fanged and snarling, made them look like demons gone mad.

Mansonby gauged their progress with the same calm care he would have bestowed on a calculus, and as their van came to the center of the open space between the cliffs and the crippled ship, he gave a signal which caused hundreds of small explosive bombs to rain down upon them. Torn to pieces, they fell in scores; but those behind merely leaped over the dead and dashed on, and the distance being small, reached the ship, where the bombs were useless against them. More thousands raged up behind, and in spite of the continuous bombing, which scattered them right and left, it looked as if the ship were doomed.

At this inopportune moment it was to appear that these Drugos were capable, in a crude way, of concerted plans, for a Drugoan ship dipped into view, flew slowly over the beleaguered vessel, and unloaded its cargo with such precision and deadliness, or luck, that several huge boulders struck the rear part of it and literally tore it in two, opening the way for the besiegers to rush in upon its unfortunate occupants.

**T**AKING in the desperate situation and acting in the same breath Mansonby barked out an order to the pilot to land quickly alongside the stricken ship, then turned to Maltapa Tal-na. But the intelligent, quick-thinking Martian, as on a former occasion, when attacking instead of rescuing the Cereans, had anticipated him. In him became suddenly galvanic all of the hundreds of generations of his fighting forebears, when fighting had been fighting.

His voice was the roar of a hungry lion at bay.

"Attention, Martians! Stand by to board! Mars! Mars!"

The deafening war cry of his Martians drowned even his voice of thunder. "Mars! Mars! Zdara za! Zdara za! Tal-na and Mars!"

The skillful pilot made a perfect landing, though he risked his vessel in doing it. Masses of Drugos were ground to atoms under its iron heel, as it came to a crushing, crunching halt with the emergency drop gate opposite the breach in the fallen ship, through which the screaming Drugos had begun to pour from both sides.

The sides of the flagship trembled with the war cry of the great Martians, now aroused to the fury of supermen.

"Zdara za! Zdara za! Tal-na and Mars!"

At the precise instant Mansonby released the drop gate, bridging the few feet between the two ships.

Maltapa and Orala, side by side, their bulging muscles of pliant steel uncoupling like resistless springs, each striving to be the first, leaped together, their men sweeping at their heels.

"Mars to the rescue!" thundered Maltapa. "Mars! Mars!"

"Mars and Tal-na!" thundered the reply. "Zdara za!"

The deep-voiced beasts of the neighboring jungle stirred and rumbled their protest.

The mighty Maltapa and Orala, shoulder to shoulder, living supremely now at last, their weapons spitting

death, opened the way. The lovers of Tinata and Tinana, lighter, but almost as formidable, one on each side of their leaders, guarded their flanks from mischance. From then on it was a furious melee of men and beast-men. Backward and forward the battle raged. When the greater mass of the beast-men seemed about to press back the Martians, the intelligent warriors, their leaders rising to the height of battle gods, called on their hearts of oak and sinews of steel and turned back the awful tide.

Mingled the thunder of the Martian war cry with the fierce roar of their savage enemies.

The Drugos, the stronger, fighting on their own ground, and fortified by ages of ruthless savagery, struggling and snarling fiendishly to the last breath, fell by scores. The Martians, evolved from ages of intelligent, reasoning warriors, intoxicated by the ancient battle cry that stood for love and home and children, fell singly and in pairs. Their leader gods, flanked by their resistless guards, though bruised and torn and bleeding, stood invincible.

"Mars! Mars to the rescue!" they roared, and "Mars and Tal-na!" the reply flung back from the fighting Martians.

The last Drugo that had entered the vessel died without quarter; those that struggled up were crushed back; and the breach was guarded by Martians, who roared their taunting defiance at the surging masses below, and flung the corpses of their fellows down into their gnashing faces.

In the very nick of time Maltapa, beside Orala, at the breach, seized him in a grip of steel in mid-spring, and dragged him back from leaping down to carry the fight to the Drugos on the ground. Under Maltapa's direction they then began the work of driving the Drugos back by the use of hundreds of small hand bombs. At last they withdrew slowly and grudgingly to the cliffs.

The fight was over. Victory was on the proud banner of Mars. But there was still the beleaguered ship, and there were still the unrescued prisoners, and between them untouched thousands of Drugos, insensately eager for the fray.

Mansonby had not waited to see the battle. That was Maltapa's business. Maltapa would not fail. When he had seen his Martians leap for the throats of the Drugos, he had turned away to his quarters, beckoning Marlin, who, he feared, might join the fray, and knowing full well that in this battle of Titans, strong man that he was, he would have been crushed like a fly. Maltapa and Orala, and the lovers of Tinata and Tinana were the men for that work.

"The fight is on the ground now, Marlin, and we've got to take it off," he said calmly, as he issued an order for the landing of three of the five Jovian ships and two others of his own, reserving two of each aloft. "We've got to get out of here tomorrow, Marlin. We have to get home and get ready for that Venerian job of Octavus Lawrence's, you know. Martin will have his hands full, poor lad, without taking that on.

**T**HE vessels maneuvered into a semi-circle between the cliffs and the wrecked vessel. From the latter all but a few guards were removed to the other ships. A shift of 200 Jovians was set to work removing the instruments and portable fittings to the other ships. The wreck could not be salvaged; it would have to be left for the amusement of the Drugos.

Meantime an accounting showed fourteen Martians dead, and nearly all the remaining ones more or less wounded, but all on their feet and quipping each other

merrily through bloody lips on the enjoyable fight. They were given such treatment as was required.

By this time the brief day was too near ended to undertake any further operations. Searchlights were placed to light the workers and illuminate a broad space about the ships. The ships remaining afloat arose into safe positions. All but those who were engaged slept, as far as sleep could accompany the hideous medley of sounds from the beasts of the neighboring jungle, and the sporadic yip, yelp, and snarl of the cliffside. The wounded Martians slept under curative rays.

Elo-ta was at his telepath. Mansonby and Marlin joined him.

"Got it, Mansonby!" he exclaimed triumphantly. "As soon as it's light I can point you exactly at the cave where they are."

"Good work, Zah! That's the thing we need next. What sort of stuff are you getting from them now?"

"Pretty badly mixed," Elo-ta replied. "There's something doing up there in the prisoners' cave. I can't make out what it is, but these prisoners have something new in their heads. I can't seem to interpret them at all. The pictures all refer to something about escaping, but that's only natural. That's what they would be thinking about. But I can't interpret them clearly."

"All right, then, old son. I'd say they are figuring on taking advantage of any opportunity to assist them in getting away. But let that go for now. In the morning we'll check up your radio compass by a little job of triangulation. Now I'll explain my plan of campaign for to-morrow, so you and Marlin will have it in mind. To start with, the Drugos are too many and too powerful for us to go right out after them in the open. We'll have to outwit them. Now listen carefully—especially you, Marlin, because Zah has his hands full right here at the telepath. As soon as it's light enough, I'm sending you up in a tender to our two ships overhead. I've given them orders for preparations. You're to be in command up above. When I give you the word, you're to drift over to the north of here a few miles and start a hell of a rumpus. Fire plenty of guns; drop bombs; do anything to attract a lot of attention. Fly low so these Drugo fellows here can see you. What I want is to create a diversion—mix them up—get them bothered and running in circles."

Marlin nodded with a grin. "I see, Chief."

"When you get a mob of them started your way, make as if to land; but keep drifting away northward—as long as they'll follow. Get the idea?"

"Sure, chief. Diversion to draw them off out of your way."

"Yes. All right, then. You'll have the two Jovian ships overhead move over and stand directly above the cave where the prisoners are, which Zah will point out. You give them the orders and explain so they'll get it all clear. This has to work all at once, or there may be hell to pay. When I give the signal they'll drop over that part of the plateau that lies right back of the cave, and stand ready with their electric rays to keep the Drugos away from the plateau right above the cave. All of these ships here will take the air except one. Maltapa's to stay with one, and when the others leave, he's to maneuver as if he were trying to follow but couldn't get off the ground. That ought to bring a concentrated attack against him, and he'll keep them busy with gun-fire and a few small hand bombs—just enough to make them mad, but not enough to drive them back to the cliffs."

Marlin chuckled at the beauty of the plan began to appear.

"I'll be up above somewhere, and when everything's going strong, I'll send down some tenders right in front

of the prisoners' cave and at the same time bring my ship into position to protect them from any rush from this side while they're taking off the prisoners. I'll lay a circle of electric rays between them and the cliffs. There's sure to be a mess of Drugos swarm to the top of the cliff to roll boulders down on the tenders while they're at work with the prisoners, and the two ships standing over the plateau will drive them back with their rays. If circumstances indicate it, Maltapa will land a force and make a feint attack from here."

"Pretty thorough, I'd say, Chief," admired Marlin.

"I think it will do the business, Marlin. The Drugos won't have a chance in a thousand. Pity to go to all that trouble for these damned animals, but—they're too numerous and too strong to chance any general frontal attack in force. I don't dare do it. We might drive them back, but the prisoners would still be in their caverns away up the side of that cliff, with plenty of Drugos left to keep us from getting at them. The way the land lies we'd have a regular Thermopylae, with us on the wrong side of the Pass. We couldn't kill off all of them in a month, and—we've got to get through and get home. I'm worried about a lot of things back there."

MANSONBY and Marlin returned above, where the Jovian War Chief Rala awaited them with Sanderson. Maltapa entered humming happily to himself, looking as fresh and care-free as if fighting had never come near him. Marlin yawned and went to look out over the cliffs to the east. A glimmer of returning day showed faintly over the Jovian hills. It was time to get things under way. His eyes wandered in the direction of the range far to the north, beyond which lay the equatorial region of boiling waters and molten land.

The Drugos were up, and drifting in black masses down into the valley in the direction of the ships. Multitudes of them were swarming over the plateau toward the valley.

Suddenly Marlin started back as if struck a blow. "My God! What's that, Chief?"

The others joined him at the window.

Floating over the northern hills toward the Valley of the Drugos came a multitude of enormous, faintly luminous shapes. They approached at such speed that although they must have been hundreds of miles away when Marlin first saw them, they had nearly reached the valley as the little group watched them.

"Great heavens!" exclaimed Rala. "It's the Elementals! The ancient enemy of the Vulnos. They haven't been—"

"Elementals?"

"Yes, the Elementals. They live somewhere in the equatorial belt. I don't know anything about them, except that for some reason they are the implacable enemies of all the Vulnos. I've heard vague rumors about them, but I always thought they were only a superstition of the Vulnos."

Mansonby shook his head. "Yes, friend Rala. I used to feel that way about so-called Elementals. But there are many strange things knocking about the out-of-the-way spots in this Universe of ours, and by the time a man has been beating around a while from planet to planet through what's usually called "empty space," he's ready to listen to almost anything. There are mysterious forms of life we know nothing about—forms that are neither material, as we know the material, nor spiritual, as we conceive the spiritual, but an odd, weird blending of the two and—something else, perhaps; in short, they're outside both our experience and conception. I don't know but that—"

Rala interrupted him. "But good God, Mansonby!

You'd better get your ships out of here quick, or they'll—"

Mansonby gave a gesture of negation. "No use, Rala. Better just keep right still where we are. If they get us, they get us. If they want us, we wouldn't have a chance to get out, anyway. May be they won't notice us, and may be they don't want us. I'm inclined to think they know what they're after."

The Elementals, flying low, had reached the valley. Silently as the Angel of Death itself, they swooped down upon the now frantically screaming and milling Drugos, and seemed literally to suck them up by the hundred. One moment there would be a swarm of them, struggling and trampling each other in a mad effort to get away, and the next moment an Elemental would drop swiftly above them, remain poised briefly, and sweep upward, leaving a blank spot where they had been.

The little party at the windows turned away, sick with the sheer horror of it. Only Mansonby watched on, adjusting and readjusting his glasses, studying events calmly and carefully. He had to answer calls from all over the Solar System. He had—more than head of these avenging horrors. There was no saying when he might be called on to meet them. Better learn all he could while he could. Furthermore, even as he watched, a plan was forming in his agile brain to take advantage of the situation—if he lived to execute it, of course. They were not out of this themselves yet.

SEVERAL of the creatures flew toward the ships, hovered close over a moment, then turned back to the gruesome feast of their fellows, evidently deciding against the ships as food. Occasionally one would swoop into the jungle depths and rise with some great squirming beast in its grip.

It was finished quickly, and the Elementals were straggling away, back to their infernal homes, somewhere in the fierce regions toward the north.

As the last one disappeared over the rim of the valley, Mansonby sprang into swift action. He realized the imperative necessity of taking advantage of the temporary paralysis of the Drugos. They were by no means all destroyed. Many hundreds had succeeded in reaching their caverns, and so escaped. But with the retirement of the Elementals they would recover and issue forth again to renew the interrupted combat. And there were more thousands of them all over the wide stretches outside the valley, who might rally to the help of their kindred. For all Mansonby knew, they might already be on the way.

He acted swiftly. The intended demonstration by Marlin was omitted. Steps were taken only to isolate the prison cavern from attack, while the prisoners were being taken off. When all was ready, several tenders drew up alongside the cliff at the cavern's mouth. The Drugo guards had abandoned their posts and slunk back into the deepest recesses of the cavern, leaving the prisoners unguarded.

The Cereans, nearly a hundred in number, and two Jovian men who had been herded in with them, were quickly taken into the tenders—many of them having to be carried—and whisked up to the fleet. As the fleet was about to leave, frantic calls were heard from the edge of the jungle near by. They came from seven other Jovians—all men—who had taken advantage of the fright of the Drugos, made their way to the jungle's edge, and so around to the ships. They were taken aboard.

Not a hand had been extended to stop or hinder the rescue—not a sound to alarm them, and as the vessels swung slowly upward, not a creature could be seen moving in the valley below. Even the beasts seemed to have hidden in their jungle recesses, as if sharing the stark terror of the Drugos.

But they had acted none too soon, for even as the vessels swept away, they could see the Drugos, their terror over, emerging into the valley in dense masses.

Messages were sent ahead to Kolata *via* radio, for the reception of which Mansonby had arranged before leaving.

Ello-ta, assisted by a hundred willing hands, was comforting and caring for his rescued people. Of the nearly two hundred Cereans who had been captured by the Drugos, more than half had perished from the hardships of their imprisonment and the insensate cruelty of the Drugos. Of the eleven ships that had set out from Kolata, only ten were returning.

Of the fourteen Martian "dead," Ello-ta and his specially trained and instructed corps of helpers had succeeded in bringing back to life nine, by the scientific method he had so generously used on a former occasion to bring to life the Martian, Segala, then one of his enemies. The others were too badly mangled in vital parts to be saved. Sanderson was observing the process; Maltapa and Orala seeing to the care of the reclaimed ones.

The net loss of life in the campaign against the Drugos was, therefore, limited to the five irreclaimably "dead" Martian soldiers, and seventeen who had been crushed by the bowlders of the Drugos rained upon the now abandoned ship.

Mansonby and Marlin and Rala the Jovian War Chief, relaxing from the strain of the campaign, were gathered in Mansonby's quarters on the flagship.

"I can't quite see why the Drugos let us get away with it so easily," Rala was saying, his former meetings with them in mind.

"I'd been thinking of that, too," said Mansonby thoughtfully, "and I'm inclined to believe the Drugos thought the Elementals were in league with us and we had some power to call them up as allies."

Sanderson entered in time to hear. "There is one question I have been trying to puzzle out, but I am as far as ever at sea."

They looked up at him inquiringly.

"That is, how these Drugos—"

Mansonby interrupted with a laugh. "That's just what's been bothering me, too, Sanderson, and I'm as far as you from the answer."

Rala looked puzzled. "I'm afraid you will have to put it into words, gentlemen. You seem to read each other's minds."

Marlin was grinning, and Mansonby waved a hand toward him. "You tell him, Marlin."

"Well, Chief Rala, the thing I'm wondering about is how in hell the Drugos happened to go to Ceres in the first place."

The three Tellurians laughed together—a laugh of common fellowship and understanding.

"Oh! That!" said Rala, with a quizzical smile that proved the Jovians not devoid of humor. "I suppose some of their prisoners tricked them, though that leaves some things to be desired."

"It does, indeed, friend Rala," smiled Mansonby maliciously. "Suppose you ask your rescued Jovians about it?"

Rala shook his head. "I asked them. They know nothing."

"Ouch!" was all Mansonby said. There was a silence. Ello-ta entered. "Why all the sobriety, gentlemen? It seems to me we have plenty to be happy about."

Mansonby looked up at the Cerean. "Zah, I wish you'd ask your Cereans if they knew how these Drugo persons, with their low mentality, happened to decide

(Concluded on page 283)

# The CITY of ERIC

## By Quien Sabe

### CHAPTER I

**I** WAS walking down Broadway when I heard a cheery "Hello, Andrew" called out to me. It was my friend, Prof. James Hamilton, professor of physics and science of Yale and noted throughout the world for his invention of the power ray. He always called me Andrew, scoring the diminutive "Andy" by which I was familiarly known. Prof. Hamilton and I have been friends for many years, dating back to our trip into the northern wilds of Canada, where I had joined his party in the capacity of reporter on his trip, undertaken to expose the faked Northern Lights, that had been used to attract tourists and were the theme of much discussion and debate amongst scientists in general. He attributed much of his success on that trip to a lucky find of mine, and from this our acquaintance ripened into a close friendship. In all the years that I have known the Professor, who was as a rule very reticent, he was never so voluble, talking in disconnected sentences of a wonderful discovery made by a Mr. McDoll of Scotland, whom his friend, Prof. McLittle, had accidentally found in the interior of a Brazilian jungle.

McDoll had died shortly after Prof. McLittle had discovered him, but before dying he had told of a great mountain valley from which strange beams of light seemed to reach up into the very heavens, and of thin meteor-like ships, which seem to ply on these beams much like a train following its tracks, going to and coming from no one knows where. Substantiating his claims, he had photos of these strange light-beams made at night, and one showed a blurred image such as only could be made by a cigar-shaped tube traveling at terrific speed, and of such large size as to dwarf the mountains that lay in the foreground. He also had a strange sword-like weapon which, he claimed, was used by the native priests who lived in a village, guarding the only entrance to the valley, which was through a tunnel in the side of the mountain. This tunnel in reality was the bed of a small river, which, together with the waters of seven large springs, formed a sluggish stream, flowing through an impregnable swampy flat jungle and ending in a lake, the banks of which merged into the swamp. It was impossible to reach the bed of the stream or even the shores of the lake, except at one place where there was a narrow point somewhat like a natural causeway several hundred feet in length, at the end of which the water of the lake was deep enough to

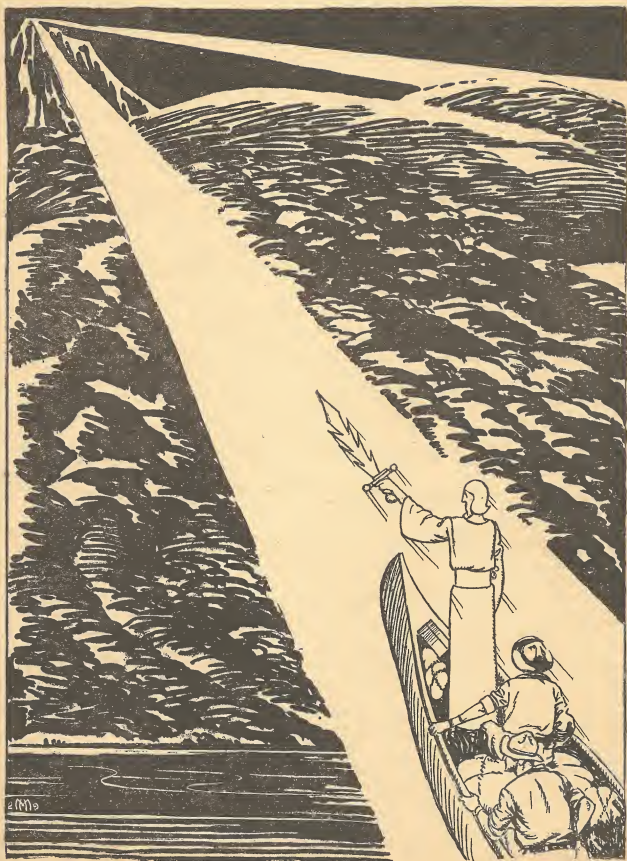
float a loaded canoe; but lost was he who made a mistake to either side of this narrow road, as the quicksands of this swamp never gave up that which they once swallowed.

This sword in itself was enough to excite the wonder of any student of physics, as it was plainly never designed as a cutting or sticking weapon. It was made of steel or iron, for it was highly magnetic, yet it bore none of the familiar characteristics of that well known metal. Its specific gravity did not agree with that of even the lightest of steel alloys known, being little in excess of that of aluminum. It defied analysis and was a glutton of electricity: a small section accidentally coming into contact with the positive wire drew a 15-kilowatt generator used in the physics laboratory, acting the same as a dead short. The handle was positively the most perfect nonconductor and insulator ever imagined. Thousands of volts were cut off by a thin section less than a sixty-fourth of an inch in thickness interposed between two conductors; but the film, for it was little more, could never be made to pass the slightest trace of current. The poles were absolutely separated by this thin division. This material also defied analysis, being totally insoluble in every solvent known, dead to any electric treatment and defying even the electric furnace itself.

With the photographs and the wonderful sword-like weapon as a spur, nothing could keep the scientists out of the field. Profs. Hamilton and McLittle were placed in charge of an expedition to take the field immediately, and to thoroughly explore the hidden valley. No expense was to be spared, contributions and requests and pleas were coming from all over the world from scientists, sportsmen and journalists to be allowed to be part of the expedition. Prof. Hamilton, however, was firm in his decision that his party should comprise not more than five white men, and that each of these should be an outstanding figure in his profession.

Our party, as finally selected, was Prof. James P. Hamilton, in charge of the expedition; Prof. William McLittle, archeologist; Prof. (by courtesy) John Bull, sportsman, cameraman and mineralogist; Prof. Robert A. Drift, chemist of great note and the inventor of the electric cauterizer process for the conversion of metals, by which he proved that all the elements were in reality the same except for their electric charges, which caused different atomic groupings; and I, through my friendship with Prof. Hamilton, was selected as secretary and journalist of the expedition.

***A**LTHOUGH a perfected knowledge of successful plastic surgery, and "beyond-the-era" mechanical devices for the use of the inhabitants of a state or country, might easily make a veritable Utopia, it does seem strange that marvelous inventions in the field of warfare—strange powers for attack and defense—should also be necessary, or that such knowledge should not work for the destruction of a Utopia. However, though a little difficult to conceive, it is quite possible that such a Utopia might exist, and our new author gives us a plausible story of unusual scientific interest that will furnish much food for thought. Next to interplanetary stories and stories of the future, Utopias, when skillfully built, seem to be a great favorite and rightfully so.*



We had hardly seated ourselves when we seemed to become enveloped in a strange, almost colorless beam of light....before we realized it, we discovered ourselves, or rather our boats with us in them, being drawn towards a point near the summit of the mountains.

## CHAPTER II

NO time was wasted. Within three weeks of Mc-Little's return to New York we were on our way.

Our baggage and accessories were of the lightest and toughest materials obtainable. Special canoes had been designed, made of a new material as light as silk but when fitted to an aluminum steel frame and sprayed with a special chemical, the discovery of Prof. Drift, would become as stiff and tough as sheet iron, but still would be lighter than aluminum. All the scientific instruments, food and notebooks, as well as photographic supplies were sealed in bundles made of this wonderful fabric. This was of great importance, for it made possible the renewing of containers in the field as the supplies were gradually expended.

We left New York on the 17th of June aboard a yacht chartered especially for the purpose, and arrived without incident at Para, where we immediately transferred our supplies to a river mail boat, placed at our disposal by the Government of Brazil. Our guides and pack carriers were also supplied by the Brazilian Government and from the military scouting department. They were to meet us at Porta Velha. So far our trip had been made without hitch or hindrance, and we had covered the entire distance in the remarkably short time of six weeks.

We spent two tedious days at Porta Velha preparing and parceling out equipment which would have to be carried by our porters from now on until we reached the borders of the swamp, and in fact, until we crossed the narrow strip of road through the swamp and placed our canoes in its waters. Every bit of the way had to be made on foot through dense jungles.

Again Providence favored us and aside from a few stops made to provide fresh meat we made rapid progress for this kind of going, arriving at the lake ahead of the allotted time set for the trip.

We pitched our camp at the edge of the swamp on a small hillock close to the road or causeway leading to the lake. Here we set up our canoes, preparing them for our final leg of the journey. All our equipment was parceled out and loaded into its special compartments and then sealed, making it doubly safe from accident, and the canoes were skidded along the causeway and launched into the waters of the lake. We were off on the final leg of our journey, full of speculation and expectation, but not one of us dreaming of the greatness of the adventure that lay before us.

Everything went so smoothly that it seemed that all our precautions were just wasted effort. We paddled for seven days through lakes and sluggish streams, never leaving our boats, for though we differentiated between what we called lakes and streams, there was in reality no shore to mark the boundary of what we called the stream, only tall grasses and fernlike growths with here and there groups of enormous trees, gay with orchids of almost every variety.

On the seventh day we got our first sight of high and dry land and shortly thereafter came up to the first spring bubbling up violently almost directly in the middle of the stream. Our excitement rose to the fever pitch and every available paddle was put to work, even Prof. Hamilton trying to wield one until the rest of us ordered him to sit down, as he was hindering the progress of our boat. No longer was our progress orderly, our past security had lulled our caution and we were each racing to have the first view of the strange mountain that hid the valley of wonders that we knew would become visible when the shores opposite the last great spring were reached. John Bull, of course, was the first to arrive. He had taken a paddle and with mighty

strokes seemed to just raise his end of the canoe out of the water, and his paddlers, catching his spirit, paddled as I have never seen natives paddle before. Their boat fairly flew over the water. He arrived at our final camp several minutes before the rest of us, and just in time to see a mighty ship, the same as McDoll had described, plunge down into the valley behind the mountain. In the excitement of the moment, he let out a mighty shout that proved our undoing, or rather brought about our early capture.

## CHAPTER III

WE had all reached the shore and were preparing to pitch our tents, when apparently from nowhere there appeared a tall gaunt man with a distinguished bearing.

His dress was the simplest, being merely a loose gown held in at the waist by a wide girdle, both the gown and the girdle being apparently made of the same material, having much the appearance of extremely soft leather, spotlessly white. His skin was fair, his hair of a light golden yellow and his eyes dark, almost black. He seemed to see through one to his very soul. On his breast, strapped firmly in place, was what appeared to be a highly polished crystal, cut and faceted much like a rose diamond, which seemed to be alive with fire darting from each facet. In his hand was a short sword, the counterpart of the McDoll sword. One of our bearers in his fear and excitement reached for his gun. Our visitor merely pointed his sword, as it were, and the gun flew out of the guide's hand, falling at the stranger's feet. Not a word had been spoken, yet the stranger seemed to have fathomed our every purpose, and after surveying us intently, finally spoke, using perfect English.

"You have come to see, to learn, as we have gone forth to learn; but your world is not ready to learn that which we might teach, but because you have seen you may not go back; for, as one brought five, five would bring many and we would have to conquer your world, which we are loath to do. Go to your boats and prepare to move as if by water. We would move you to our city and there let Eric be your judge."

We readily obeyed, for we had no other choice; and as Prof. Hamilton remarked, "We are only getting to the port of our choosing without effort, even if under forced circumstances." We had hardly seated ourselves when we seemed to become enveloped in a strange almost colorless beam of light. I say light, yet if it had not been for future experiences I doubt if I would realize the presence of the light-beam; its intensity and color being so nearly like that of the tropical moon. Our real sensation is hard to describe; the feeling being much as if a force were being directed against our entire body uniformly and drawing us to it much like a magnet. Before we realized it, we discovered ourselves, or rather our boats, with us in them, being drawn towards a point near the summit of the mountain. At first, we moved slowly, but gradually gained momentum and were soon traveling possibly in excess of one hundred miles an hour. It is hard to estimate the speed at which we were traveling, owing to the absence of wind pressure; the air moving apparently at the same rate as we and in the same direction. In an incredibly short time we found ourselves, boats, and paraphernalia, deposited on a table-like shelf, high up on the side of the mountain. A wide road led from here around the mountain and down into the valley below. The source of power that had moved us so expeditiously, we assumed was located at the very top of the mountain. Prof. Hamilton was the only one of the party that took, without some outward show of feeling, our queer, to

say the least, experience. McLittle took it philosophically, remarking:

"Their power seems to be unlimited; they have us in their control, wholly and unalterably. If we but discover the source of the amazing power our lives would be but a small forfeit."

Bull, always the sportsman, and never admitting defeat, countered.

"I have been nearer the end than this. Why think of death when we are just at the beginning of what has every appearance of being the greatest adventure one could imagine."

Driff assumed the pose of being too much of a chemist and scientist to even seem to be aware of the extraordinary conditions surrounding us and was apparently in the seventh heaven, examining the smooth, I might say, glossy smooth, surface of the roadway leading down from our landing shelf. It was really worthy of the great interest he was giving it, but I thought I could see quite a bit of nervousness underlying his all too rapt attention and am afraid that, at this time, the scientist was used as a cloak for the man. Frankly, I and the natives too were plainly scared. We were facing the apparently supernatural and until we had it explained or become accustomed to it, we were in a blue funk, cowering and expecting the worst. The natives of course showed their fear of the supernatural in their characteristic manner, huddling together like so many sheep, crowded all in the middle of their respective canoes, praying to their greatest deity, hoping and trusting that it would thus give them its protection. Yet, these were the pick of the fearless, interior scouts of Brazil, never before known to quail or show the slightest sign of fear or pain in the face of the worst torture. I call your attention to this that you might not rate me as too arrant a coward.

We were on the shelf, unguarded, and left to our own devices, yet the thought of escape never seemed to enter the mind of any of us. By common consent, it was taken for granted by those who were able to think that escape was impossible and the rest of us were just too scared to think for ourselves, let alone act.

#### CHAPTER IV

**A**FTER what seemed hours, but were really minutes, our mentor of the spring again appeared; this time seated behind the cowl of what looked like the body of an extremely large-sized streamline racing auto but minus wheels or any sort of running gear. The machine was naturally traveling at a terrific speed apparently without guidance yet always maintaining its same relative position to one side of the road and traveling a few inches above it. The machine stopped almost in line with our canoes. Alof, which we learned was our captor's name, here brought his marvelous sword into play. First, he took his position just back of the seats, that were arranged in three tiers behind an opaque, low dash, and which were covered by a gracefully curved cowl. I think that is the best word to use to describe the glass-like cover that extended from the dash and completely surrounded and covered the seats. After ordering the men in the canoes to sit still in a rather peremptory manner, he raised his sword and described a graceful movement such as one would make when indicating that you were to get up and cross over from the place you occupied and be seated in another. You may imagine our wonder when we saw the whole canoe nearest him rise and follow the indicated motion, settling down neatly on the rear of Alof's vehicle. The other canoes being rapidly loaded in the same manner, Alof indicated that we were to come aboard. Prof. Hamilton took the seat next to Alof

with McLittle next to him, while Drift, Bull and I took the seats immediately behind. All being settled, Alof pointed his sword at a small opening in the dash and immediately a glass cover rose out of the sides and back and connecting with the front cowl completely enveloped the machine. Pointing the sword into another opening, caused the machine to turn on its own axis and occupy the outer side of the road. Alof then sheathed his sword in a perpendicular sheath at the side of the seat and we were off. No attention seemed necessary to be paid to the guidance of the machine. Its destination was predetermined and the machine would follow its route unalterably.

Alof proved to be kindly disposed towards us and in an amused sort of way answered Prof. Hamilton's questions, only elementary to him. He explained that all work in the City of Eric was performed by the unlimited power that was generated by the earth in its rotation on its axis, and that all the supposedly superhuman things that he had done were accomplished by the intelligent use of this power. His sword was in reality a storage battery in which disassociated molecules were stored, each molecule while in this disassociated condition had a tremendous radio activity and the millions of billions stored within the battery had only to be intelligently released and properly activated to be made to perform the stupendous tasks we had already witnessed; these were, however, but child's play as compared to the tasks they were often called upon to perform. We learned that they were controlled partly by thought-waves and partly by rays emanating from the crystal worn on the breasts of all the inhabitants of Eric, both male and female, and that they were never used as a weapon of offense or defense, although they could cause one's body to be thoroughly disassociated if so directed. The crime of annihilating any animal with this ray was punishable by a like annihilation of the criminal; this to them was the only punishment they dreaded, as death by this means meant the end of all, while death by any other means only meant sleep and reincarnation at a future time under happier conditions.

We had little time for discussion and inquiry, for by this time as we had come into view of the city of Eric, a most wondrous sight indeed, comparable with no other city of the world, its wondrous beauty held us spell-bound. Its designers and builders seemed to have considered well, not only the exterior beauty of the individual building, but also its harmony and fitness of association with its surroundings. All the buildings seemed to radiate from a central structure, built much like a circular bee hive. It was of enormous diameter at its base and towered well over a thousand feet in height. This building occupied the highest part of the valley, the crown of an almost circular hill. It was built of pure white material, the same as that used in making the road we were traveling on. The whole city was built of this material, but the buildings in different zones were so colored as to give the appearance of a circular rainbow, each color zone blending into the next, with the lightest color at the outmost edges. The shadings growing darker gradually seemed to merge into each other, until at the base of the central pile the color was an extremely deep shade of violet, against which background the central building of pure white seemed to reach out and tower to the heavens. This central building was covered with the most exquisite sculpturing starting at its very foundation, as it were from the very beginning of time, with scenes of a wondrous fiery waste, the earth in its infancy. And in slow spirals around and around the edifice, step by step and ever upwards, was portrayed the development of the

world, with man gradually gaining the ascending hand and from then on the development of the human race. Each scene was a masterpiece and by some mysterious trick of illumination each and every detail seemed to be outlined with a faintly glowing light, that held the perspective in bold relief and made the sculpturing clearly visible high up the tower to where it was still in the hands of the master craftsmen bringing the history ever up to date.

We entered the city, driving down a wide avenue bordered on both sides by shrubs, and having dwellings nestled deep among the shrubbery, each dwelling a gem in a perfect setting and blending harmoniously with the landscape. The shrubbery, lawns and buildings were all of the shades and minor tones belonging to the zone in which they were situated, only the road being a broad white streak, leading to the central tower. Alof had slowed down on reaching the city limits and the sight and the beauty of the scene will be impressed on me until the end of my life.

#### CHAPTER V

ARRIVING at the tower our machine entered through a wide arch and proceeded to follow a circular ramp, leading steeply down into the lower foundations of the building and ending in a large many-sided room. Here after the opening we entered by had been closed, our machine was unhooded and everyone was ordered out. Our boats and paraphernalia were then raised in the same spectacular manner, apparently without aid, to a door high up in one side of the wall and disappeared through the opening. Our guides and porters were then conducted to a small room to the left of the entrance by which we entered, while we were brought into a spacious apartment, very light and airy, and fitted up much like a combination operating and ray room of a modern hospital. The light originating from a frieze totally surrounding the apartment cast no shadows and was very soft and easy on the eyes. Here we again saw the wonderful sword of Alof in action. Each in turn, we were ordered to stand on a pedestal elevated slightly above the floor, and as we stepped upon the pedestal, Alof brandished his sword before us and there was a wave of light followed by a puff of smoke and we were naked, nay, not only naked, but hairless. We were then conducted to another platform surrounded by a circular mirror which opened on hinges to allow one to enter and which, when closed, completely surrounded the occupant. In the mirror there were eight slots running from top to bottom, four containing lenses. These recorded on moving films, photos of the body, each of a different depth, as it were, in proportion to the penetrating quality of the rays projected through the slots.

The pictures taken were afterwards made into a composite, which, when run through a projector, indicated exactly the markings of each part of the body. This composite was then focused and run in conjunction with a picture of a perfect specimen in such a manner that both pictures registered as one on another moving film. The film thus produced was then passed through what you might call an electric diagnoser which by the intensity of variation in the lights filtering through it recorded an exact diagnosis of the correctness of the functioning of each part and organ; this, in turn, on being run through another projector in conjunction with another film indicated just what should be done to rectify the ailment. We all passed our allotted time in this wonderful machine and all were then ordered into separate adjoining rooms, each a perfectly appointed operating room, where we were to have ourselves made mechanically fit, as Alof explained it. The mode of procedure

was the same with all of us, so it is needless to explain more than what I experienced.

On being conducted into the room I was told to mount and recline on the operating slab that occupied the center of the room. As I mounted, I expected to feel the cold unyielding surface of a marble slab. You can well imagine my surprise to find the slab slightly warm and readily yielding to the curvature of my body. Alof then ordered me to relax and this is the last I heard, felt or saw until I was told to get off the table by one, who, I afterwards learned, was one of the most celebrated surgeons of Eric. He was rather friendly and in a jocular way remarked:

"No pain, eh; been here less than a second, eh? Must have decided not to operate, eh? Well, we'll see," and with this he hooked his arm in mine and proceeded to lead, no really drag me, into a small auditorium, muttering as if to himself:

"No hurry, companions won't be out for hours, your case complicated, serious but easy to get at, no scars, no open wound, learned to overcome that ages ago, heart, kidney and lower intestine intact; we'll see, we'll see."

Somewhat of a jumble of words but a conversation characteristic of Horric "the erratic little runt" as he was familiarly called by Bull and who was destined to become Bull's closest friend and companion on many an adventure on planets we had never dreamed of ever viewing except through a telescope.

But let us get back to our story. Where was I? Oh, yes, just beginning to describe that queer little surgeon, Horric. Horric was less than five feet high, with a barrel of a chest and legs and arms out of proportion to the rest of his body, long and slender, not slender from weakness, there were no weaknesses in Eric, but just slender in proportion to his body, which was not fat, for fat is a disease and there is no disease in Eric. The real thing was that Horric took too much after his mother, who was a Martian. There were a lot of those queer little fellows in Eric, the outcome of two planets, with their fiery red hair, dark copper skin and black piercing eyes. Horric just ran truer to the Martian type, his brow was broader and higher, his hair redder, his eyes were deeper and more piercing and his humor more acute than the other Eri-Mars as this really distinct race was known. He was just a giant of a Martian, being a Martian in all respects except that he was half a foot too tall, the average Martian being less than 4½ feet in height. Even his clipped mode of speech was truly Martian.

WE took our seats in the auditorium behind a little box-like machine and Horric took off his head piece. There was so much about Horric out of the ordinary that I forgot to mention his strange head-gear, a large scintillating stone that might have been a diamond, except that its light was greater and originated from within it, rather than merely being a reflected and refracted light. This he placed in the box and so adjusted it as to reflect its light through a lens on a screen, much like a movie screen. While he was doing this, an attendant brought in a film roll which was also adjusted in the box. Horric's eyes fairly danced while he was doing this. His mirth seemed to be beyond bounds and he kept muttering in his laconic manner.

"Less than a minute, less than a minute, it's marvelous what we can do in a minute, just one short minute, eh."

With that he started the projector and I saw myself walk to the slab in the little operating room and climb up on it. I then lay down on it and saw Alof bend over

me and speak, all just as it had happened a few short minutes ago. Ah, but what followed showed me that time was truly man's own definition, for as I slept Horric appeared followed by three attendants, all dressed much like him with both the habitual breast stone, called an Itor, and the head pieces, called Horrics, after Horric, its inventor. They each bore a small sword in their hand, much similar to that of Alof's, but much smaller in the blade and with a handle several times as broad just above the hilt. Horric explained that these were used for work that required great care and precision, that the broad hilt was a kind of control box for directing and controlling the intensity of the ray emanating from the sword blade. The head stones, or Horrics, were a combination of head light and sterilizing agency which so acted on the walls of the incision, which was made by the rays emanating from the sword blade, as to preserve the tissue formation so perfectly that when they were released and allowed to come together they immediately were healed, leaving absolutely no scar. I saw myself cut, or rather laid open, practically my entire chest and abdomen unfolded as it were, yet never a hand touched me, an attendant on either side just held his sword blade pointing at the line drawn by Horric, the flesh and bone seeming to part and unfold upwards following the line he drew, laying bare the entire inner organ. I then saw Horric apparently trace around my heart; there was a thin curl of smoke and where the heart apparently worked with a jerky irregularity it now began the work with a smooth rhythm. He next seemed to spread my abdomen wide to one side and the attendant on the other side apparently moved back just a trifle; but as he moved my intestine seemed to follow, laying bare my kidneys. They seemed to be soft and enlarged with irregular blotches on them. Again he traced around the organs, as he did the heart, and they seemed to shrink, taking on a firm healthy appearance. I then saw him remove the lower bowels and treat them similarly, after which the lights emanating from the Horrics seemed to grow in intensity, and gradually the incision was allowed to come together, until presently I was entirely healed and I saw myself awaken and speak to Horric, the film ending at this point.

Horric then explained to me that a similar picture was taken of every operation and that the party operated on, and in the case of a child the parents, were compelled to view the entire operation and release the surgeon and attendants after seeing that the work was done properly and that no undue liberties were taken with the body while under the forced sleep. The operation that I thought had taken less than a minute, took me more than an hour to view, and I was told that the pictures were run at three times the speed at which the operation was performed, so I must have been on the table in excess of three hours.

#### CHAPTER VI

WE still had some time to wait for the others, so Horric who was at his leisure, conducted me to a kind of anteroom where we were served a light lunch. We had been in the company of Alof and his people for almost twelve hours, yet this light meal was more than ample, and I really had no feeling of hunger. I later learned that under the influence of certain of the molecular rays one could go for days without food or water, but eating in moderation was considered one of the joys of life and that only certain extremists ever went without eating, living entirely on emanations of the molecular ray. Alof came in about this time and informed us that all our party had successfully undergone our respective corrective operations, and that we

would shortly be conducted to our apartments where we were to await the pleasure of the Eric's company. He conversed on various matters for a short time until we were joined by the rest of our party, McLittle being the last to join us.

Alof then addressed us saying:

"You no doubt are wondering why you have been so treated, the reason is double; first, as a protection to ourselves; all coming to our valley are inspected, sterilized and treated before they are allowed to come in contact with anyone or anything of the valley and city of Eric. You have noticed that until after you had been sterilized, which occurred when you were unrobed, and until after you were operated on, you came in contact with no one, even having been conducted to this, our immigration station, and capital in a hermetically sealed vehicle. The place where you first landed has been swept by a killing ray that has penetrated the very earth for several yards below the surface. These are precautions we have taken for ourselves. Justice being one of the first tenets of our religion we have prepared your body making it whole as far as it lay in our power to do, that it might be well fitted for the tasks set for it by the Eric for the advancement and benefit of mankind."

We were conducted to a lift, similar to our elevators, which took us high into the tower and we were ushered into what was to be our apartments, during our stay in the City of Eric.

The apartment was small but comfortable, consisting of a fair-sized community room with the same many sided construction noted in the receiving room of the immigration hospital, and like it having no windows and the same lighting effect. Off each of its sides were smaller rooms, the private apartment of each occupant.

The community room. We were each shown our own apartment, each of which were identical, consisting of a bed room and a bath adjoining. The bath was in reality a plunge in which water was continually running. The bed room was furnished merely with a slab of rubbite, like a bed. (Rubbite was a synthetic material used by the Erics for almost all things, from clothing to road building. It replaces steel and iron, wood and fibre; in some forms it is soft and pliable, in others, stiff and hard with enormous tensile strength). Another graceful article of furniture that acted as a chair and clothes-shoot (I call it a clothes-shoot for lack of a better word, but if you think of it as a shoot you must think of it working both ways, as carrying your clothes away and replacing them, that is, after cleaning and repairing, bringing them back). Whatever happened it worked like this: when you undressed you placed all of your garments within a case on the chair-back and when you started to dress, you took your garments out of the same receptacle, but they were then the same as new, each time you got them out. The garments of all the Erics were identical and of the same soft beautifully white rubbite material. They were draped loosely from the shoulders and held in at the waist by a broad girdle, allowing absolute freedom of limbs and body.

After being shown to our apartments we were left to ourselves, Alof informing us that we were to rest and make ourselves comfortable and that in a short time our evening meal would be served. It seems that we had been in the Eric's immigration station for over twenty-four hours and that it was now six P. M. We had been taken (in view of the royal treatment we had received, since having been in the company of the Erics, we will say captured) at about noon of the day before. During that time we had had one light meal. Yet, though not one of us was really hungry, we looked forward to the next repast.

We all repaired to our private apartments and I for one, tried the plunge. It was delightful, the water was neither cold nor hot, was slightly perfumed and seemed to make my body tingle with a pleasant warmish glow.

ON entering the bath I had failed to think of a towel to dry myself on, and so on getting out, was prepared to undergo the unpleasant ordeal of having to dispense with drying my body and having to put my garments on while still wet. But on getting out I felt a slight current of warm air flit past my wet skin and on investigating found that the Eric's towel, if you will allow me to call it so, was a warm current of air, that rapidly dried or absorbed the excess moisture from your body, leaving a soft very slightly greasy coating on the body with the pleasant aromatic odor I had remarked in the bath still clinging to you. This bath was probably the most restful and delightful I have ever indulged in. I felt like a new man, buoyant and youthful and if my appetite was not very sharp before, it was well whetted now.

On repairing to the community sitting-room, I found the rest of our party waiting for me. They had also been impressed by the plunge and all expressed themselves as having been greatly exhilarated and a feeling younger and better than they had ever felt before.

We were discussing quietly our dreamlike experiences, when Horric appeared at the entrance to our apartment. He saluted us with the Eric's salute, a slight bow of the head accompanied with a wave from the waist outward of the right hand and entered without waiting to be asked. The Erics have no intrigues or secrets and unless one is in the privacy of his inner apartment, which is sacred to them, it is most natural for them to invite themselves to become party to any conversation or gathering that might interest them. He addressed his remarks more to Bull than to the rest of us, saying in his clipped manner:

"Not adjusted; might be dreaming; strange, eh, but not so bad, eh, would feel pretty much the same in your place."

And then addressing Bull directly:

"Feel that you and I will be friends, go through danger together, about my time for Jupiter, big world, big game, you're a sportsman what say, might be arranged, might be arranged, eh?"

With this laconic utterance he drew up a seat.

"Eat, no; pretty hungry, eh, be up shortly."

He made himself comfortable and indicated that he would dine with us.

Our meal appeared almost immediately thereafter coming out of what apparently was a blank wall and arranging itself automatically on a rubbite slab of graceful design and affixed to the wall at that point. Horric seemed to have been waiting for just this moment and seemed to enjoy our surprised looks and expressions greatly. He slapped his knees and almost shouted in his mirth.

"Not so bad, not so bad, even the dishes have their own mind, eh? Most natural, eh, but no fundamental law violated; same as the car you came in, not guided, knew just where it was going, eh, and stopped when it got there. Wonderful, eh? No, simple; rubbite, a perfect nonconductor, kurl, a perfect conductor, thousands of lines of kurl laid in rubbite lead everywhere, like your telephone lines. We select where you want to go, insert our rumber, what you call swords, we go there just like you set your phone number on phones. Same with platters, discharged on table, they make contact with circuit and follow circuit to place, and as no

two can occupy same circuit there are no mistakes; simple, eh?

"Kurl is another synthetic product that varies in its characteristics, depending upon the use it is to be put to. Everything that is to carry current or energy is made of kurl, and everything that must be a nonconductor of current or energy is made of rubbite. These two materials in their various forms are the only materials used. There are no metals or stones, base or precious, in use anywhere in the City of Eric. Neither is there money or any other medium of barter and exchange in use, but let's not digress from our dinner."

It was a most delicious and toothsome repast, served in a most unusual manner and well worth comment.

As I remarked before, our meal was served in a most remarkable fashion, coming out of a blank wall as it were, and traveling of its own volition to our various places. It was really weird, and yet Horric's laconic explanation made it out to be not so preposterous after all.

FIRST, there appeared a row of crystal clear glasses, with hollow stems, much like our champagne glasses, their bases of deep emerald green and their stems shaded from this deep opaque green at the base up to the bowl where the color was entirely lost. After appearing at the back of the table they halted there for the fraction of a minute, as if to give one time to contemplate and admire their beauty and grace. They were really worthy of admiration, perfect specimen from an artist's hands, graceful and alive with lights and glints of diamond and emerald. They advanced across the table to our respective seats, halting at each its proper place. They had hardly come to rest, when there appeared a most handsome decanter filled with a sparkling red wine, which traveled across the table and halted before Horric, who was seated at the extreme right. Horric, with a comic salute, tipped the decanter without raising it from the table and filled his glass. On releasing it, the decanter traveled down the table halting before each of us in turn, we filling our glasses in accordance with Horric's instructions, in the same manner he had. The last glass filled, the decanter moved slightly farther to the left and remained stationary. Horric lifted his glass and with the simple toast of "To Eric" we quaffed of the wine of the gods, for surely the nectar of the gods could hardly have been its equal; its aroma its smoothness, its exhilarating qualities were surely meant for more than mortal.

On placing our glasses back on the table, we were instructed by Horric to use care in placing them as nearly as possible in the same spot they had occupied previously. You can imagine our surprise when the last glass had been set down, to see the decanter retrace its movements, stopping before each in turn as before; the wine apparently having changed in both color and aroma. Where it was truly a wine before, it was now a sparkling clear water slightly perfumed and very satisfying to the thirst. Horric's explanation was simple. The color, the aroma, the taste were electrical vibrations controlled and emanating from the base of the decanter, the vibratory waves had simply been changed when the decanter had come to rest. Horric, on filling his glass now raised the decanter and set it down again slightly farther back on the table, and it moved to its place of entering and then disappeared through the wall.

Following the wine came a course dinner, served in a like manner, on plates and platters patterned after the same color scheme as the glasses, crystal clear at the top and outer edge and gradually merging into an emerald green at the base or bottom. The viands were deli-

cious, but they were neither fish nor fowl, meat nor vegetable, but all products of the electro-chemists' shop, compounded and turned to the taste of a queen. Such a meal, such a flavor, such invigoration I had never experienced before, or as Bull expressed it, "After a meal such as this, I could clean up the jungles of Brazil, even of its insects, a mighty task, for they are myriads."

The repast finished, the table cleared itself. All one had to do was to raise the dishes and set them slightly farther back on the table as Horric had done with the decanter.

## CHAPTER VII

**I** NOTICE I have taken up the Erican habit of speaking of a person as if he had but one name. In Eric, a child is given a number at birth, also a name. The number is serial and never changes, the name is selected by its parents and by it the child is known only to its family and intimates, otherwise it is known only by its number, until it has accomplished something of decided benefit to the community at large, or has accomplished some feat that is extremely praiseworthy, in which case he is given a name publicly, by which he is thereafter publicly known. Such a public name may be one denoting a rank, comparing with our titles, such as governor, president, etc., or may be, as in the case of Horric, a name coined to fit the occasion of the discovery and given to both the discovery and discoverer. The highest public name of political sense is Eric, but if one had made a discovery of such note as Horric, and had been given the title Horric as he had been, the title Horric would not be given up on attaining the title Eric, as the name of Horric in this case, would be considered more honorable than that of Eric, there having been Erics before but there having been no other Horric. So, in the case of Horric, being made Eric, there would be the rare case of a compound name, which would be Horric, the Eric. Other than this, there are no titles of designation or respect, one being simply called by his name or number without preface or handle.

Our meal finished, we fell to conversing on various topics of general interest, finally entering on that of religion. The Ericans are one and all extremely religious, yet there is no temple or shrine in the whole of Eric devoted to religious purposes. In his work, in his play, his thoughts are constantly on the Hereafter. There is no need of minister or priest, for every Erican believes, no, he knows, that in this life he is preparing for a future higher life to come after death, and that as he sows here, so he shall reap in the Hereafter. Death to the Erican has no sting. It is welcomed, but not sought, for no Erican would cut short his time on earth even by so much as a second, for fear that he had not earned his earthly reward and hence would lose his future advancement. Yet, there is no Erican that would not gladly give up his life for the common cause of mankind, for in so doing, he is sure of his future reward. An Erican would not take the life of a friend, for in so doing, he might cause his friend to lose his earthly reward and so work him an injustice, neither will he take the life of his enemy, even for the undeniable benefit of mankind, for a life is sacred, given by the Great Eric and only to be taken by the Great Eric when it has served its purpose and earned its earthly reward. The Erican, as a child, is taught the religion of every race and creed of this earth, and also that of each of the other seven worlds that they are in communication with; for through the religion of mankind, is the will of the Great Eric best shown,

and as the child is taught that each creed or religious belief is but an adaptation to mental condition of the tribe practicing it, to be amended as the comprehensive powers increase but always to the glory of the Great Spirit, the Great Eric, and to the ultimate advancement of mankind. Through this religious training, the Erican has gained tolerance of all religions and religious beliefs; he is taught that the religion of a people is not to be tampered with and that the Great Eric will take the will for the deed and in due time work out the salvation of all mankind. It is this training that has made it possible for the Erican to travel throughout this world and in fact the whole universe, without let or hindrance, absorbing the knowledge and learning of all to the further advancement of the City of Eric. The Ericans are ever ready to listen and learn, even from the most ignorant, their greatest axiom being: "The savage knows that which we have long forgotten, let us refresh our memory from the savage that we may not be more ignorant than he."

The foregoing is the substance of Eric's explanation of the religion of the Ericans. We talked for hours and on Horric's advice, retired; as he expressed it, "Rest well for who knows what the morrow will bring forth, and you are on the eve of going before the Eric."

We retired to our private apartments and our rubite slabs. Lord, what beds these slabs were; they yielded to each and every curvature of the body distributing one's weight so evenly that you felt as if you were lying on the very air. On reclining, the lights of the room grew dim, and there seemed to emanate from the slab a slight perfume, faint and pleasant, and with it came sleep, undisturbed and oh, so refreshing. It seemed that I had no more than just lain down when I was awakened by the sound of a bell in deep hushed tones, followed by the announcement by a pleasant female voice that we were to arise and prepare to be received by the Eric.

Shortly after we had assembled in our community apartment we were joined by Horric and Alof who were to accompany us.

We repaired to the lift and descended to the ground floor where we entered a waiting machine somewhat similar to that in which we were conveyed to the emigration station from the cliff, far smaller and exquisitely designed. Alof, Hamilton and McLittle took the front seat and Bull, Horric and I the one in the rear. Alof inserted his rumbar and we were off to face the Eric.

## CHAPTER VIII

**T**HE beautiful scenery was lost to us. We knew we were never to be allowed to return to our civilization and our minds were all filled with conjectures of our ultimate fate. In an incredibly short time, our machine stopped before what one might call a crimson park. The lawn, the shrubs, the very leaves of the trees, all artistically blended shades of crimson, and in the background was a building also of crimson, yet one must not think of merely a crimson landscape, but it must be likened more to the reflection of a huge fire against the heavens with its changing hues and its life; that is the feeling the color gave—life, active, pulsating life. The scene was veritably alive and it made you feel good to be alive and view it. We forgot our worries of the future in contemplating it. We were simply spell-bound by its beauty.

Horric broke our reveries by exclaiming:

"A masterpiece among masterpieces. I have viewed it a thousand times and in it each time I see new, hidden beauties; our Eric is indeed a master of masters."

With this remark he stepped from the machine and indicated that we were to follow. At this point there began a rubbite walk that apparently led for ten or twelve feet terminating at the lawn's edge. Neither signs of a path nor even of footprints on the sod indicated where others had trod on approaching the dwelling.

I was wondering how it was possible for one to tread on so delicate a growth without leaving a footprint, when Alof solved the problem for me by inserting his rumber within a slit that had hitherto escaped my attention. Immediately a small portion of the walk at the farther end rose and from under it came a small platform arrangement large enough to hold eight or ten persons standing. Horric motioned to us to step on the platform, Alof coming on last and drawing his rumber from the slot in the pavement as he stepped aboard and inserting it into a similar slot in the platform. Immediately thereafter the platform seemed to rise to a level just above the sod and started to approach the dwelling. On arriving at the entrance, Horric explained the operation by answering our unasked question.

"All over the lawn and through the shrubs are lines of kurl set in rubbite; one can go at will to any part of the garden or estate of Eric over these lines without ever setting foot on the sod. Not only do these lines of kurl serve as a means of directing 'sees,' small platforms the same as the one we are on, but they also carry the current that governs the growth and shade of the plants adjacent to them."

On alighting from our "see," we entered a small but gorgeously appointed reception room, decorated all in the color scheme of scarlet and lighted by a diffused lighting scheme of palest of rose lights emanating from obscured screens and so scintillating and varying in intensity as to make the scene constantly change. Even Hamilton, the staid, quiet scientist, was moved to exclaim:

"God, what Beauty."

## CHAPTER IX

WE had scant time to appraise the beauty of the apartment, for almost immediately on entering we were met and greeted in the casual friendly Erian way by a woman, who might have been Horric's sister, the resemblance was so close. Short and swarthy with red hair, large chested and small limbed, not an inspiring picture at first blush and in such surroundings, but then up to now she had not spoken.

She addressed us. Lord, what a change—a slight smile of welcome flitted across her face, her eyes brightened, her grace, her simple words, cast a spell upon us; her lack of beauty was no longer apparent, her personality held us in its sway. We were in the presence of the Eric.

You can imagine our surprise when we found that the Eric of Eric was a woman, and not a handsome woman, but one that had earned her position by merit, charm of manner, and deep insight into the needs of mankind.

Her greeting was simple. "You have sought the city of Eric, in the quest of knowledge, not for personal gain, so strived for in your civilization, but in order that the knowledge so gained might benefit the world as you know it. We know your world better than you

do, and know that your masses are not ready for that knowledge you seek and we would try to prevent the catastrophe such as occurred in the city of Eric when we were thrust from ignorance to enlightenment at the time of the first coming of the Martians. The science of the Martians was soon grasped by our learned men of that time and they in turn passed their knowledge so gained, supposedly to the masses. But what really happened was that only those few who were mentally alert grasped the value of their teachings and a syndicate was formed and the knowledge gained was used solely for the financial gain and aggrandizement of the few to the detriment and slavery of the many. Our great tower was built, our miles of rubbite and kurl roads were constructed, our city was laid out, our outward advancement was great. Ah! But at what cost! The enslavement of our populace, that was to last for over two hundred years, was the cost, until the mixed race of Eri-Mars came to the rescue of the City of Eric and through its finer teachings the Erics learned that the wealth of to-day was not measured by the gold in the treasury, but by the gain of the morrow, and that each entity was but a cog in the scheme of things, all working to an ultimate higher end. Our civilization is now enduring and will endure for all times, for we recognize the knowledge and the power of THE GREAT ERIC and work in his cause to the benefit and advancement of all.

"You have been brought before me, not to mete out judgment upon you, but that you might know the Eric of the temporal world as all here know her, and that you might see and hear the trial, verdict and sentence of your guides and bearers, for whom you no doubt feel much concern, as to their condition and treatment, both now and in the future. But, enough for the present, let us first have breakfast and become better acquainted. Your Eric has become much interested in you each personally, since the first exclamation of Bull apprised us of your arrival at the seventh spring and your every utterance has been weighed in the balance that you might be judged truly and well; but let me add that it was the Eric that listened in, for the woman in her was interested in the manner and character shown by each on beholding the wonders of our city and civilization which must have seemed marvelous to you, who beheld them for the first time, and I must say that you, one and all, betrayed characters far in advance of the status in which your civilization was portrayed."

The Eric then conducted us to an adjoining room, decorated and appointed with the same marvelous artistic taste as the reception room. Here we were served a simple but very tasty breakfast, and learned our first lesson of the truly great, for here we, mere scientists of an inferior civilization, were fêted and made feel the equals of the acknowledged greatest mind and arbiter of seven worlds, each of us feeling before the meal was over that we had gained a friend, not an acquaintance, but a friend that could be depended upon in time of need, and that friend, the peer of peers, the Eric of seven spheres. Where in our civilization would the like have happened? Where is there an official, even a minor official, that would give his time to the reception of scientists of an inferior civilization except for gain and even then would not at some time make his superiority felt to the discomfort of his guests?

Our meal over, we were conducted to an assembly room, where we found the rest of our party, our pack-bearers and guides, already assembled. We were stricken dumb by the change wrought in them. Their

menial spirit had left them, yet it was not replaced with arrogance or lack of respect. They accosted us as equals, yet there was a certain deference of respect too, in their hail; and, wonder of wonders to us, they accosted the Eric as a close friend of old standing.

That is what I call civilization, with the Ruler and the pack-bearers on equal terms of intimacy, without swagger or arrogance, and the judge and the judged meeting as it were in friendly debate. And such a trial! If you can call it a trial where one's faults and one's virtues, one's knowledge and one's ignorance and one's health and one's failings are weighed with a view to one's future happiness and benefit to the community. Such was the trial that we were to witness. Our men had had their mental failings as well as their physical ones corrected at the immigration station hospital, as far as it lay within the power of the Erican physicians to do it, and under the tutorage of the Erican companions with whom they had been thrown in their brief stay in Eric, they had absorbed much of the Erican habit and customs. Life, under various conditions and on the various worlds of the Erican universe, were pictured and explained to them in a most realistic manner and mechanical devices registered their reactions and emotions, both visible and invisible. They were questioned minutely as to their likes and dislikes, habits and customs, and also as to their imaginary needs to make this life their ideal. A composite of the records so obtained was then made and the ideal conditions for their greatest happiness were thus obtained.

Pictures were then shown of three different groups of men, leading lives along the lines figured as best suited to the three classifications our men were divided into, and they were asked to choose which, if any, of the lives and occupations they would like to lead. Hamilton had been handed a card on which the men were grouped in accordance with their assumed proclivities, as indicated by their respective composite, and we were asked to observe the men carefully as they watched the scenes portraying the lives calculated as best suiting their nature and education. It was a treat to see how their faces lighted up in turn, and how they seemed to fit themselves each into a part, as it were, that they felt was particularly fitted to them. As they viewed these scenes, the recording instruments were still registering their emotions and on the completion of the show, for it was really a most excellent show, each in turn was asked to express his views and likes and dislikes together with his desire to emulate which, if any, of the characters depicted. Each expressed himself as being particularly well fitted to perform the duties, and live the life of some one special character, with the greatest of happiness, and in every case their composite had indicated just such a condition and occupation as best suited to their well-being and happiness.

You have never seen such bright and happy faces as theirs when Eric told them that the pictures they had just viewed were in reality scenes from life very near to that which they were to lead in the near future. Even the fact that they were to be divided and sent to three different planets and possibly never see this world again did not seem to affect their joyous outlook, and strangest of all, for those that had just come from the deceit and treachery of our civilization, they took the announcement of Eric of these strange promises as if they had never been deceived or known of treachery in their lives. Such was the character and magnetism of Eric.

## CHAPTER IX

THE trial completed, the Eric remarked to us generally: "You have seen our method of meting out justice. Such has been the Martian way for centuries; necessity made it so; but can you imagine under your past conditions of civilization the testing of each individual, mentally, physically and subconsciously, as you have seen us just do, and the selection by the State of the life that that individual must lead, even though it is for his greatest happiness, without rebellion on his side? Can you imagine your masses all working for a common good without remuneration? No, this change has to be brought about gradually and it can only come with the destruction of all medium of exchange, for as long as man can gather unto himself that which his fellow creatures will envy and desire, just so long will man seek self-aggrandizement through the accumulation of that substance, be it what it may. To-day in your great American Republic, is the most advanced civilization of the world, aside from that of the City of Eric, but what is it founded on? Success as indicated by one's ability to accumulate wealth. If a man accomplishes something really worth while, his success is acclaimed by the money that success secures. Ah, 'tis truly said of your present civilization, that 'dollars are the medals of your success.' Here in Eric, there is no medium of exchange, rubbite and kurl in their various forms are the sole materials used for all purposes and they are made in community plants and distributed for the community and individual good. The fact of having a hoard of kurl or of rubbite would not make one great, for anyone may draft any quantity of either at will, and as gold, silver, so called precious stones, and in fact any element can be made at will and in any quantity there is no desire for the accumulation of so called wealth. Hence, the measure of one's worth lies entirely in his accomplishments, in the name that he has acquired through his accomplishments, in the esteem in which he is held by his family and community and in the beauty and happiness that he has brought to his surroundings. There can be no criminals on these conditions, no shirkers or drones, for as man 'soweth so shall he reap.' The state analyzes each of its creatures at birth and periodically thereafter, not in search of their weakness, but of their strength, that those strong points and inclinations may be developed to the ultimate happiness and greatest advancement of the individual and hence the state.

"Now that you have seen the happy disposition made of your followers, we will have to proceed with the individual welfare of each of you. Horric, my brother, speaks for Bull and with his and your consent I think that he could be in no better company, nor in an undertaking more suited to his liking and desire than in the work of the development of the planet of Jupiter. Here his roving and inquisitive proclivities will have full sway, his sportsmanship and desire for thrills will be amply satiated, and he will have the fullest opportunity to exercise those natural gifts of his for his honor and advancement. The planet of Jupiter is new, as worlds go, and fraught with danger, but I believe that he will find there a life well suiting his needs. Horric leaves for Jupiter at sundown to-day and I speak for him when I say to you, Bull, that he will be more than pleased to have you as his companion on his mission,

"We will now view scenes from the life of Jupiter and give you, Bull, in particular, opportunity to come to a decision. I do not wish to hurry you in this

matter, but trust that you may decide to accompany Horric, as I think that you are admirably suited each to the other and that it is a great boon that you should be together."

The scenes from Jupiter were indeed thrilling and there was no need to ask Bull of his desires in the matter of accompanying Horric, for, before the run was half over, he and Horric were bubbling with the itch to be off and preparing for the trip.

"Court" was called off with the termination of the scenes from Jupiter and we all repaired to the apartments of Horric with the exception of Alof and the Eric, whom we left busy in conference. Here Horric proceeded to dress Bull in the full harness of a man of Eric and teach him the use of the rumbur. The proceedings were indeed comical, the question being often whether the dog wagged the tail or the tail wagged the dog, for the rumbur more often exerted its force on Bull than on the object he was directing it against, hurling him around like a leaf in a wind-storm to the amusement of all. Serious hurt was prevented, however, by the dexterity and alertness of Horric, who would always neutralize his errors with his own rumbur before real damage could be done.

#### CHAPTER X

TIME flew and before we realized it Alof and Eric appeared at the doorway and advised that we should repair to the great tower, as the ship was scheduled to leave for Jupiter in a short while.

Arriving at the tower, we were conveyed about half way up in a lift and then to the innermost tube as it was called, where we saw an interplanetary ship for the first time. A large cigar shaped ship, resembling, for all the world our torpedoes, without propellers, but with an enormous searchlight lens at the head and a similar smaller one at its stern attached between four fixed fins which ran like brackets from the sides of the tail lens well up the side of the tube-like ship. The ship was made entirely of rubble with four bands of kurl girding it at regular intervals, and four wide strips of kurl leading in straight lines down the sides from the lens in the nose to the very tip end of the side fins. It was explained that the ship derived its power from the current generated by the earth in its rotation around the sun as long as it was within the earth's zone, and that, on leaving the earth's zone, power was derived from other heavenly bodies in accordance with the locality and destination of the ship. The power was drawn from the earth's power belt after this fashion: A beam of almost invisible light was projected from an axis of the earth directly into the heavens, this beam was of a certain definite vibration and acted as a conductor, tapping the current belt surrounding the earth and conveying the current to earth much like a wire. Surrounding this beam of the light and in contact with its outermost peripheral beam, just in advance of the lens, was a band of kurl which intercepted the current flowing down it and from which the power to be used was drawn. In the case of the outer planet-ships, the lens in the nose of the ship drew the current from the power belt and the lens in the tail made contact with a target in the tower tube base and the action of the current flowing through the bands of kurl had much the same action as the current flowing through a motor, except that the pull was in a straight line.

Here we saw for the first time a crowd of Ericans assembled and for the first time realized the extreme modifications of figure and characteristic appearances the human form would undergo, so as to fit itself into

the conditions in which it was compelled to live. There was the barrel-chested Martian, the narrow chested Jovian, with his large waist and knotty limbs; the tall, straight, slender man of Venus, with his large head and beady eyes; the short, dumpy man from Saturn, with his small head and large protruding eyes and the various characters produced by the intermarriage of the various races, all contrasted with Bull, the ideal, athletic American. Their complexions varied from the deep, ruddy red of the Martian, to the milky chalk white of the Jovian from Jupiter; a strange assembly indeed, but one that I was soon to become so used to, that the varied characteristics marked as they were, went practically unnoticed.

We were almost immediately made the center of the group, each and every one seemed to know us and all were apprised of the fact that Bull was to accompany Horric. This was not strange, as, since our arrival, we had been the main attraction, all those at leisure listening to our every conversation and observing every act, and speculation was rife as to just what niche each one was to occupy, and what place we would fill. Bull had been spotted from the first as most fitted for Jupiter, and none were surprised that Horric should take the matter up with him and ask for him as his companion.

After having been made acquainted with each and every one of the assembly, and with his particular accomplishments and talents, a recital which must be gone through with upon meeting anyone for the first time and which is not as bothersome and lengthy as it might seem, we were conducted through the ship. It was my good fortune to be paired off with the captain of the ship, a jolly good fellow, a Jupe-mar by birth, who had inherited the large chest of the Martian and the great waist and knotted limbs of the Jovian and looked for all the world like the exaggerated picture of the strong man of a circus.

We went from nose to tail of the ship and were much impressed by the absence of machinery. The interior of the ship was constructed along the same cellular lines as the great central tower in which it was housed and in which we were living. The captain explained that this construction was the strongest and wasted less than any other known. In the nose of the ship were the sleeping apartments, each a replica of the other, with the inevitable pool and bath and bedroom arrangements like those in our apartments in the tower. The water in the pool, it seems, flowed over and over along the same course. It was never changed but purified and revitalized at the completion of each circuit and then continued on its never-ending journey. All the apartments opened into a central community reception room where captain and sailor, for lack of a better term, were on equal footing, each proud of the way he accomplished his duties and each striving to better his accomplishments that he might become famed in his line. Here there was no friction. The captain was the nominal head, but the co-ordination of the entire force was so great that there was practically unity of action.

BELOW the sleeping apartments came the navigation room; simply one floor with a few slots in the wall and a dozen or so rumburs apparently scattered carelessly about. The captain caught my amazed expression upon being told that this was the navigation room, and the engine and boiler room too, for there was no other machinery in the ship, and after kidding me a bit explained that the navigation was very simple and was in direct accord with Isaac Newton's law,

His version was at variance with the electrical explanation given me by Aloh, inasmuch as he belonged to what I might call the Gravity School, and Aloh to the Electrical School. His explanation was as follows:

"You recall Sir Isaac's law, which states that every particle in the universe is attracted by every other particle with a force varying directly as the product of their masses and inversely as the square of the distance between them? Well, here you see that law intelligently harnessed; here we project a ray that practically annihilates the distance to the nearest mass exerting a pull on us in the direction that we wish to go and project another ray from our tail that shorts or blanks off the pull of the mass we wish to leave, as we do not disturb the pull exerted by other surrounding bodies. We travel in a straight line towards the mass exerting the greatest pull, i.e., that mass directly in the path of the ray. The slots you see in the sides are for diverting the ray from one heavenly body to another, in accordance with the direction of travel and objective desired. This is accomplished by the action of the force within the rumber, diverting the pull of gravity to the side of the ship according to the slot into which it is inserted. The slots, you will notice, are in three lines, the top pointing upwards, the middle straight out, and the bottom one towards the exact equator of the ship; hence the intensity of the action of the rumber, which you know from past observation, can be regulated to extreme nicety; can be further governed by the position of the slot used, and I can assure you that when one is traveling at the speed of light, it takes every bit of the precision of an expert not to divert the ship miles and miles off its course, even with the use of the precision slots. You might think that a few hundred miles would make very little difference when one is traveling so fast, but contrary to the apparent insignificance of a few miles more or less, to be off one's course sometimes a scant mile, may mean the slowing up of the ship considerably, owing to the interference of another body causing drift."

## CHAPTER XI

THE captain was just entering into a long dissertation on the relative merits of the ideas of the Gravity School, as held by the Martians, and the Electrical School, as held to by the Earthians, when a shrill whir filled the air and he jumped up, grabbing my arm, and rushed me to the landing stage, explaining as we went that they were about to be off.

At the landing platform we found Horric convulsed with mirth and the staid Aloh and the Eric as well, bubbling with laughter. The Ericans naturally had a well developed sense of humor, but this time Horric had turned on the rays ahead of time breaking up the captain's discourse on gravity, just when he had a good audience in myself. It seems that Horric had missed the captain and myself, and so had started to listen in on our conversation, and when the captain had started in on his gravity spiel, a conversation no one except in public debate would enter into with him, as he could out-point and out-talk all on this topic, decided that he would break in by the only expedient known to stem the tide of this one-sided debate, the call of duty to his ship. Well, the captain's expression was a study as he strode the stage in the greatest dignity to Horric's side, and with a resounding slap on Horric's back and the exclamation "You, Horric," burst into a roar of laughter. The joke was on him, but with the characteristic Martian good nature, he appreciated it to its fullest extent.

Again the shrill whir sounded; this time in earnest, and all went aboard, or backed behind a transparent rubbite wall of an amber tint. The light became intense, flooding the entire tube and enveloping the ship; it narrowed down and seemed to come to a beam much like that of a powerful searchlight, but of an intense bluish green. There was a swish and the ship was gone. One did not see it go, it was there and it was gone, nothing remained but a thin pencil of light sputtering and crackling on a target of kurl, the last touch of the ship on mother earth, already thousands of miles distant in space and bound for Jupiter.

The ship gone, we returned to our apartments with Aloh, the Eric bidding us goodnight and inviting us to see and have breakfast with her in the morning in company with Aloh, who seemed to have been appointed our special guide.

Arriving at our apartment, Aloh advised us that we had better retire early as the Eric no doubt had a full day planned for us on the morrow. Taking his advice we all retired to our private rooms and after taking another of those wonderfully invigorating baths retired to our rubbite slabs, and I, for one, slept like a babe, awakening only with the musical chimes announcing that Aloh was waiting to conduct us to the Eric.

The Eric, over a most charming breakfast, explained that reports from Horric and Bull were very satisfactory and that the ship was making good progress without incident, and that Bull, in particular, was having the time of his life and was the center of amusement for the entire ship. He was learning to handle his rumber and Itor, the Eric suddenly remembering, as it were, that we might find amusement and pleasure in seeing our friend Bull hard at work with rumber and Itor while traveling in mid-ether, pressed a button, or in some manner or other, for I really never saw her move a muscle, caused a small screen and projector to appear at the far end of the room, and with her rumber, the smallest I had ever seen, proceeded to tune in. First there was only a blur with faint stars visible here and there. The stars faded out and the screen became a dazzling white with a dark spot in the center. This spot rapidly developed into the inter-planet ship and in less time than it takes to tell it, the ship grew to such proportions, as to fill the whole screen and then the assembly hall came into view with Bull suspended in midair and whirling like a top. Horric, the captain and the whole crew were doubled up and convulsed with laughter. We could hear Horric yell as plainly as if we were in the same room:

"Concentrate, man. Ho, Ha, concentrate, ho, ha, see the rag come to you, ho, ha! Not you going to it, Ho, ho, ha."

There was a general burst of laughter; Bull was seen to catapult to the middle of the apartment and land face down on a small piece of rubbite that he was trying to cause to come to his nose, as a handkerchief. Horric's voice came again in explanation:

"Don't you see you must forget that that rag is away from you and that you must get within reach before you can use it. Quick as thought Itor causes your rumber to act. If you release your pressure while you are visualizing yourself picking up the rag your rumber is going to put you where you can go through that act. Here is what happened to you: First, you saw yourself handling the rag but without first seeing the rag coming to you, so your rumber threw you towards the rag, quick as thought. Again you visualized your error and a dozen conflicting

thoughts rushed through your mind; result—you spun like a top, then you got desperate and saw the rag at your nose, result, it was there, or rather you were there. Ha, ho, you have got to get over your absurd notion that inanimate objects cannot be made to move. That is your whole trouble. See it coming, direct it, don't see it there and then here, for inevitably you will do the moving. Now again, you see the rag lying in the middle of the floor, you see it rise slightly and float gently in the general direction of your face, you see it unfold and the center of it present itself to your nose. You now see it leave your nose and float gently back to its original place—proceed."

Proceed he did, the rag raised itself gently, we heard Horric shouted "Good." The next thing we saw was a blur in the line of flight one would expect the rag to take and Bull lying flat on his back; the rag had come with such speed as to knock him down. There was a general roar this time not only from the spectators on the ship, but our land chorus also. We were all convulsed. The Eric snapped off the picture and between spasms of laughter exclaimed:

"Enough, you will all afford someone just such amusement, for you will all have just such a time as he is having, in forgetting lifelong habits of thought. Let us eat, as our day is short."

#### CHAPTER XII

**B**REAKFAST over, we assembled in the court room, as I dubbed it, and the Eric explained that she had one bad piece of news as we saw it in our present enlightenment, which was that McLittle's time in this life was to be short. The germ of decay, ever present in our bodies, had already attacked the nerve center of his spine, the one part of the body the Erican surgeons dared not touch, and believed by them to be the seat of life. Her words will be ever remembered by us all.

"McLittle, you have spared not yourself in the search of knowledge that might be of some advantage to your fellow men. In the gaining of such knowledge you have drawn heavily on the spark of life and not in vain. You have advanced far in your short life's allotment, and, with our aid, you will make still greater strides, such strides that your future life will be on a far higher plane than is attained by most in several lifetimes. Fear not death, it is but the pause of assimilation, for as surely as you live you rise again after death to carry on to completion your "greater life's" task.

"You have before you one or two years of usefulness;

within that time it will be your opportunity to compile such of the facts of the past as we have unearthed, in a way that will be of most benefit to your civilization as you know it. We have hesitated to do that in the past as we feared our greater knowledge might cause us to divulge things simple to us, in our enlightenment, but preposterous to your time of civilization, and thus make our works good reading, but fiction. You, with your name and your knowledge of your race and its advancement, we think can compile a work that will be of untold benefit to your civilization and we will endeavor to place at your disposal such data as will make this work possible, trusting to you to sift the material, presenting only such in your volumes as will be within the comprehension and belief of your fellows."

Having delivered this speech, she called for one of the librarians, whom she introduced by number, and named as a collaborator with McLittle in this great piece of work.

The rest of us were then, each in turn, put through his paces, as it were, and each allowed to choose his future along lines best adapted to his learning and proclivities. Hamilton was to go to Mars, where he was to do research work with his power-ray, the chronicles of that world being complete on that subject from its first inception to the period of atomic power that superseded it. Atomic power itself was to be succeeded by the direct application of the power derived from the power belts of the universe. This work, it was hoped, would be of value both to our civilization and to that of the Erican. Of course, in accordance with the Erican idea of happiness, he was to have many an adventure to enliven his work, and make it the more attractive and agreeable.

Drift was sentenced, as it were, to Venus, whose civilization was in need of just such a brain as his, and where his temperament and proclivities would fit most agreeably, while I was given the task of preparing this manuscript and later to cover the life and adventures of each of my companions of this great adventure. All of which the Eric promised would be published in due time in our own world, that it might be of benefit and profit to our civilization, preparing it for the wonders of the future as it were.

Trusting that you will be lenient in your criticism when you remember that I have had to picture scenes and events far ahead of our time and yet with only our present limited vocabulary, I am turning this in to Alof, who will place it in such hands as will see to its publication.

THE END

The Next Issue of  
**AMAZING STORIES QUARTERLY**

will be out on July 20th

# THE CRY FROM THE ETHER

By Aladra Septama

(Continued from page 269)

suddenly to take a trip to a little place they were ignorant of, to take some prisoners they didn't know were there."

The detective's tone was almost petulant.

"No good, Mansonby," said the Cerean. "I talked with them. They think the Drugos must have had humans along, but they weren't allowed near them, and never saw them, either on the way or after they got to Jupiter."

RALA looked at Mansonby sympathetically. "Shall we ask the ladies, friend Mansonby?" It was left at that.

During the absence of their lovers, it was natural that the charming Tinata and Tinana got to know the vivacious Signa Latourelle, the seductive Adrienne Ellota, and the interesting Therma Lawrence; and that Mary Terra Morrison entered the circle. Natural that, since the Jovian twins were indubitably to go with their lovers to Mars, the third Jovian girl should wish to see the native world of her father, Samuel Morrison of New York, and his friend John Hudson of San Francisco.

Other Jovians went along, and since plans were making to extend regular transit outward to Jupiter, Morrison and Hudson promised themselves the trip as soon as they could conclude a certain scientific investigation they had under way—that and the matter of putting into use on their adopted planet the things they had learned from their visitors.

It was not until they were nearing Mars that Mansonby adopted Chief Rala's suggestion anent the ladies, which he did with elaborate pretense of casualty.

"Ah ha!" jeered the saucy Adrienne, her feminine intuition making no difficulty of Mansonby's pretense, "so the immortals are at last consulting the mortals!" She pointed a teasing finger at the "immortal" in question, who wished he had kept still. "Well, we girls figured that out at a pink tea the other day; and the fact is—"

She paused tantalizingly, and Mansonby reached for a paper-weight.

"O, please, Mr. Immortal! Spare me, and I will tell you all!"

Adrienne made a face at the detective and proceeded.

"Some Cerean scientists for example, believing part of Jupiter must be inhabited, and having the usual scientific disregard of human life, determined to try to prove their theory. They kept their plans secret from their fellow Cereans, and when missed it was supposed they had perished somewhere about Ceres, as they were always poking into odd corners. They succeeded in reaching Jupiter; landed in the Hot Lands, and were captured by the Drugos, who kept them alive to operate the ship for them. One day when flying with some Drugos, they managed to drug their food, made them prisoners, and fearing to risk another landing on Jupiter, made for home, highly elated at having proof of their voyage. They arrived safely and landed on Ceres. But just after they had connected the ship with the new landing tube, which runs from the interior of the ship to the inside of the subterranean entrance, the Drugos managed to get the upper hand, shut the scientists up in the pilot house, herded the Cereans into the ship, except for a few that were killed or wounded, and compelled them to return to Jupiter. They were therefore the second band of outsiders to set foot on Jupiter, Morrison and Hudson being the first. One of the wounded who had been left behind for dead, managed to send out the call for help before death came."

"My dear," said Mansonby, with a look of respectful admiration at the saucy Adrienne, "if you ever want a job, there's one for you with the Mansonby Interplanetary."

In the silence that followed, Maltapa arose and opened a window. They had entered the Martian atmosphere. "Insa Belqua in half an hour," he announced.

THE END

## SPEEDING

We are dashing along in our snug, wee car,

Of granite and iron and gold,

At eighteen miles a second

Through autumn, summer, and cold.

Five hundred eighty million miles

Each year we dart around

An unmarked track, as in gilt and black

Earth wheels without a sound.

Our automobile is part of a train

That moves at the slower pace

Of a dozen miles a second

In an interstellar race.

A huge and splendid machine is guide;

It lights the burnished band,

Saturn and Mars and six other cars,

To the swoops of Lyra-land.

LELAND S. COPELAND.

# Editorials from Our Readers

THIS being your publication, you, the reader, have certain ideas, not only about this publication, but about scientification as well. The editors believe that their mission is complete when they select and edit stories that go into the making of this magazine. On the other hand, they feel that you, the reader, have a more detached view of the magazine itself, and that very often your ideas as to the magazine, and as to scientification in general, are not only valuable, but are original and instructive as well. For that reason it has been decided to print the best letter—about 500 words—which can be used as an editorial, on the editorial page and to award a prize of \$50.00 for any letter so printed.

The letters which do not win the Quarterly prize, but which still have merit, will be printed in the "Editorials from Our Readers" Department, newly created in this magazine.

Laudatory letters containing flattering remarks about the stories themselves, or of the magazine, are not acceptable for the editorial page. We want inspiring or educational letters, embodying material which can be used as an editorial along scientification themes.

Remember, it is the idea that counts. A great literary effort is not necessary, as the editors reserve the right to edit all letters received, in order to make them more presentable for publication.

Remember, too, that anyone can enter this contest, and everyone has an equal chance to get on the editorial page of AMAZING STORIES QUARTERLY heretofore.

This contest will continue until further notice. Contest for each issue, closes the 15th of month preceding date of issue—viz.—contest closing date for the next issue is the 15th of June.

## There Is No Limit

SCIENTIFICATION writers have done much to dispel the old-fashioned, and one must admit, somewhat concealed ideas which held that man was the only creature which could possibly possess reasoning powers, and that our tiny earth, of all the innumerable millions of planets in the universe was the only one that was inhabited by intelligent organisms.

Although contemporary scientification authors are constantly introducing into their stories inhabitants of other worlds, they seem timid and shy about deviating from the preconceived notions of how a sentient reasoning being should look. This is easily understood, because man's inherent egotism naturally balks at admitting even in fiction, that a mosquito or a lizard possesses as much intelligence as he does. Of late, though, a great deal of progress has been made and authors have begun to deal with all manner of queer beings who, as a matter of fact, are just as probable as are we human beings. On the other hand, why stop there? Scientists and scientifications alike join in precluding the possibility of there being life on any of the other planets except Mars and Venus, merely because these are the only two which very closely approximate the conditions of Earth.

As accustomed as the readers of AMAZING STORIES are to wild and forceful flights of the imagination, I dare say that, if any one were to write a story about a race of people or beings who lived on the sun, the story would be ridiculed at once and branded as absolutely impossible, and, figuratively speaking, the author would be torn limb from limb. "Preposterous," you will say without hesitation, yet is there any good reason why it should not be so? Of course the sun may be totally gaseous, but then again it may not be. Perhaps the flaming corona and sunspots we see are just atmospheric disturbances in the stratosphere of our star. Even if the sun has no solid surface that may not be necessary to its hypothetical inhabitants. Without doubt, the sun would be entirely different from us, they might even breathe gaseous sodium or iron, for oxygen is not the only atmosphere in which life survives. Some bacteria thrive in an atmosphere of nitrogen, others die when exposed to air, so why, then, is it not plausible that these imaginary Solarians of ours could not be composed entirely of inorganic matter and literally breathe fire? The terrific heat of the sun would not discomfort them in the least, for they themselves would be just as hot, and relatively, they would be no worse off than our star than we are here on our earth. Who knows but what chemists at those high temperatures is entirely foreign to the chemistry we are familiar with in the comparative coolness of the furnace here on Earth, and who knows but what Solarians go around munching on sticks of carbon and other highly refractory substances for their meals?

Or, consider the opposite extreme: A planet as cold or as cold as the average temperature is close to absolute zero. Where the rainfall is liquid helium, where the liquid is oxygen's natural state, where there is very little if any gaseous matter, and where the wants and needs of the inhabitants' bodies are supplied by their food. A land where ice is melted by huge furnaces in which the temperature occasionally reaches as high as four and five degrees

centigrade. Imagine a country in which ice is used as steel is used here—crystal cities—if the people were addicted to the wearing of jewelry they would indeed wear crystals of ice on their fingers.

Picture to yourself a steam (?) engine made of ice, driven by the gas produced by boiling liquid oxygen in a boiler of ice!

Surely in such situations there is abundant material for many very amusing stories, incredulous sounding and apparently "impossible."

Don H. Nabours,  
425 West Park Place,  
Oklahoma City, Oklahoma.

## Excelsior

IT takes from fifteen to seventeen years of thinking and studying or better still fifteen to seventeen years learning to think and study before we permit our children to step into the business, technical or professional world, before we permit them to touch or handle the controls which govern life and business in this world.

It takes from fifteen to seventeen years to put a new idea, product or method into every day use or application.

There is a scientific connection between these two statements. Fifteen to seventeen years is the period or rather the length of preparation for our active life.

Just as we studied the three R's, so now we study Scientification to fit us for a better understanding of Science. It becomes a textbook rather than a pastime and we become students rather than mere readers for amusement.

Scientists, theologians, philosophers, teachers, scholars and readers have long deplored the dearth of real thought-inspiring material.

Scientification has brought into being materials which make us think and will ultimately bring into being some of the things suggested as possibilities.

We are learning to think and to study, learning to handle the controls of a newer and purer scientification Cosmos, the portals of which are closed to us until we graduate from a college not so different, if more advanced, than that college which graduates our children into the business, technical and professional world.

When we shall have completed our studies, we will be graduated into the Cosmos. We shall learn to consider the Universe instead of just one small world, and to discover new relations and unsuspected connections between this world and our sister planets, our lives, our progress and our future being.

As the engineer, pipe in mouth and reference books scattered about him, muses the problem before him, so we, too, as we are graduated around us, muse the future relation of one world to another and the effect of the newer understanding which grows upon us day by day as we pursue the problem before us.

As the engineer says, "Knowledge is Power," the word science really means knowledge not as applied to things technical but in relation to all things.

Scientification holds forth a blazing torch over the pathway of our Future and cries aloud, "EXCELSIOR."

David Le Roy Blakeman,  
328 Broadway,  
Rensselaer, New York.

## Continue With Scientification

IN this age of mechanical and scientific marvels we are prepared to accept almost any achievement as a matter of course and the inventor or scientist is forced to look to those of his own class for the proper appreciation of his accomplishments.

The fact that we are so blasé is rather in our favor, for it proves that our minds are on a higher level than were the minds of our forefathers; that they have been prepared, in some manner, to accept these wonders that would have seemed incredible not so many years ago.

What has prepared our minds to accept these wonders as a part of our everyday life?

First, it is the enormous strides made by scientists and inventors during the past few years. The colossal work has been done with more practical inventions and the application of more scientific truths than were any several centuries preceding. We are living in a mechanical age, and almost daily some mechanical device is perfected or some scientific truth is proven which will lighten our tasks, eliminate some pet inconvenience, or make life easier.

Second, we are being protected from these wonders through Scientification, the blending of fact and fancy. With facts as a foundation, the imagination expands the idea and builds a tale of what may possibly be a reality in the future.

I stroll to the mighty river nearby, my dog at my heels. We stop on the bank and stand looking out over the waters. I see the moving waters and, in the distance, the farther bank of bleak land sloping down to the water's edge. My dog, whose eyesight is not so keen, can see only the flowing water, and to him it is nothing more than an expanse of moving water which may continue on for an infinite distance.

As I stand there musing, my imagination does the river with water craft of various kinds and the opposite bank is occupied by an extensive air port with planes taking off from the field and maneuvering in the air above. The water craft, the air port, and the planes are not there, but what I see is certain that they will not be there some time in the future. Even now, this particular plot of ground is being considered as a possible site for an air port to serve this area, and, before many months have passed the work of development may make it a reality.

We are all agreed, regardless of our particular religious convictions, that there is a universal intelligence in some form; and this faculty of imagination must be a gift of this intelligence to the human race. Who knows but that this power of imagination is nothing more nor less than the manner in which we are being prepared for what is to come? Our poor little minds can only grasp and comprehend just so much and we can assimilate, only by degrees, that infinite wisdom of the great intelligence that governs our little world.

Any medium through which this faculty of imagination can be developed is worth while and beneficial. Scientification is helpful in this respect and it also provides interesting and pleasurable reading. It gives us an idea of what seems incredible now but may be commonplace in the future and it stimulates our own imaginations.

W. J. Walker,  
P. O. Box 822,  
Huntington, W. Va.

## Mind Over Matter

DOWN through the ages it has been the aim of man to devise easier and more efficient means of doing work and of modifying nature into different shapes and altering its matter chemically in such a way as to serve him in the best possible manner.

A popular theme of scientific writers has been the creation and disintegration of material objects by means of thought waves or mental effort. This seems of all dreams to be perhaps the most impossible.

However, let us take a few proven facts plus just a little imagination, and even this dream can be made to seem not so impossible. What matter? What amount of matter and energy are actually contained in any finite object, let us say the earth? According to the atomic theory, all objects are made up of infinitely small particles of matter separated by comparatively vast distances. That means that in an apparently solid mass there is far more space vacant than that actually occupied by matter.

The arrangement of the sun and its planets is very suggestive of the arrangement of the nucleus and the electrons of the atom. So let us assume that these two, the celestial arrangement of the planets, and the atomic arrangement, are merely two divisions of a continuity of divisions of matter. Man has fancied space and time as extending to infinity. Why not the sub-division of matter?

If that were true, each time matter was divided into smaller particles, the actual cubical contents of solid matter of a given object would decrease. So that would mean that all of the matter in the universe, if that were true, would actually be equal to any given quantity larger than zero according to our present knowledge of mathematics; but why not an absolute nothing?

We cannot define the infinite in a way to lend itself to calculation. If this line of reasoning was a proven theory, it would mean that the earth, the universe, were no more than a dream, or no more than a thought. It does not seem at all unreasonable to believe that one of two mediums of very nearly the same nature might by sufficient development gain control of that which had been its master through countless eons.

Robert L. Wilcox,  
625 North Grant Avenue,  
Wilmington, Delaware.

## Scientific, Interpreter of Science

THEAT continual scientific advancement is the basis of human progress, is one of the axioms of modern civilization. Its truth is self-evident. The fact that man, purely through his own resources, is incapable of any considerable development, has been stressed time and time again. It is, therefore, to science that he must obviously turn for aid. By the assistance of science alone can the human race hope to rise in the evolutionary scale. The science of the future will be the heritage of the world by the common property of humanity.

It is here that Scientificism plays its important part. Scientificism is the medium by which science is expounded to the layman, for it is the link between the laboratory and the people. And it is largely through the agency of the Scientificism writer that the public is enlightened as to the enormous strides made every day in that great field of human endeavor, science. As yet there is no other way. Text books are usually too technical for general reading, since the majority of them almost always presupposes a certain amount of scientific training on the part of the reader, while those works that do not, are too elementary. It is true that there are magazines of purely scientific nature, but unfortunately they are interesting to only a small group of readers and hence find but a limited circulation. The reason for this is that fiction is the most popular form of literature at present. Most people, due to the general lack of scientific background that exists in the education of the average person of today, prefer to read an entertaining romance or a thrilling tale of adventure rather than an article relating to some so-called scientific discovery. So perhaps they are to be censured too much after all for their lack of scientific interest.

Since a remedy is to be sought, Scientificism offers a hope of alleviating this regrettable condition. Besides merely providing a source of scientific information to those people who are to assimilate it in no other way, it also has a pronounced tendency to stimulate an interest in scientific ideas and attainments where none has existed before. To this last statement can be

ascribed a simple and obvious reason. It can readily be seen that a person who is a total stranger to the world of science, if not guided, would probably never in the whole course of his life either willingly pick up a book treating with some scientific subject or show any desire to acquaint himself with some of the facts connected with that study. But let him once get engrossed in a scientific story from the pen of a skillful author and immediately his interest is awakened. It is true that the scientific part of this narrative usually occupies a position of secondary importance at first. However, this does not matter. The main point is that his curiosity has been stirred regarding a new and completely unfamiliar world about him. The guiding hand has expressed a desire to learn more and more of this enlightening subject until, finally, the cause of science has won one more adherent.

Thus, both for its ability to create an interest in science in an individual and its value as a connecting link between the common layman, Scientificism is rapidly becoming an indispensable factor of civilization.

David M. Speaker,  
452 N. Smalley Street,  
Philadelphia, Penna.

## The Object of Scientificism

WHAT seem the impossibilities, the theories of today, will become the possibilities, the realities of tomorrow. The progress of man is such from the beginning of the world. The everlasting searcher for the truth. The pursuer of the unexpected, the unusual, the uncommon, the mysterious, the extraordinary, the extraordinary and the fantastic. Always man has sought something new to break away from the monotony of the present day common life. Without new thrills, new hopes, new things, life would be tiresome. There need no surprise then, when our foremost scientific writers with great imagination predict the wonders, the magnificence, the gloriousness of the future. To us men of this generation there should be no conflict between science and religion contrary to all so-called one sided minds. Why then all these so-called laws proposed by theologians to stop the teaching of evolution or prohibit the teaching of certain sciences? The earliest religious scripture says that man was born with a free will destined to be the ruler and master of all his faults and all things on earth. There's been a creator, for nothing creates itself, but as to all the material things on this earth and as to the other planets, man as the master-piece of God, was put into this world for the very purpose to master everything on earth and to always go to great depths and efforts to find out the truth about anything. The ones who try to impede the progress of science are mere old men who track mind and grasp both sides of any question. To me it seems that the object of scientificism is and should be to bring religion and science, man and his creator into close harmony and thus work out and achieve all the things that man is supposed and was supposed to work out and achieve.

I have been a constant reader of all the sciences and religious matters for many years and I do not reason why they should not work together in close harmony to bring out the best that is in man. The ones that try to impede science are the afraid of the truth, that's all. Far better to let the children of the present truth than to teach them untruths that they might later ridicule their teachers.

Joseph D. Antoni,  
1414 So. Eighth Street,  
Wineland, New Jersey.

## Is Scientificism a Liability or an Asset?

DISCUSSIONS of scientificism have shown us that it has many critics. Whether or not to save the value of this work and of science, the critic estimates scientificism as stories that are ridiculously absurd and impossible. To him, the reader wastes time in absorbing something which will only misconstrue and shatter upon the walls of conviction of life and science. It would be an injustice to allow youths, whose characters are being moulded, to have access to this type of reading; for it would influence them all through life in an adverse and harmful light, and let the beautiful things in life be under-estimated and cast aside. Furthermore, the speculative suggestions, if taking root in the young mind, may grow to dangerous and harmful form of some mad, hazardous experiment. Upon the strength of these arguments, the critic would prohibit scientificism.

But all institutions of learning the object of principle importance is to teach the pupil to think, and to think for himself. Arthur Brisbane writes, "Whatever makes men think is

useful." Creative thought is the thing that raised man from the troglodyte to his present plane of civilization. It is unnatural for man's mind to remain stagnant; if it does not improve, it will degenerate. The majority are inclined to let nature take their course and mechanically repeat their work and habits day after day and year after year until they cease to exist. Man cannot afford to let this happen! Ever the medium of creative thought must be encouraged!

Many hours are devoted by authors of scientificism in creating the thought to be expressed by their pens. This is the thought is only the beginning. The theme has to be written, incorporating the scientific data and expressing the idea so that its practical possibilities can be grasped. The successful author can transfer his life, through the medium of scientificism, to the reader's mind. The average reader finds it entertaining and instructive; and apparently impossible hypotheses, when interwoven with scientific data and guided by an interesting theme, are easily absorbed and given more thought. *Man begins to think!* Those that ponder upon these ideas longest are liable to produce the most creative and original thoughts. Scientificism is hailed by advocates as a guiding influence to future life and industry, but it is even broader in its scope. This type of story has a teaching, an escape out into the brain of an ordinary person and stimulating that something lying dormant in his creative mind, which later will take shape in the form of some new invention or discovery.

When we consider that the pessimistic attitude of the critic is generally the result of his erroneous classification of scientificism with speculative and sensational literature of questionable value, and when we listen to the advocate of scientificism trying to conceive with the help of science, as to make real a better and brighter future, so we must not concede that this clean, elevating fiction should be discouraged in its purpose? Because *thought*, not contentment, is the standard of quality for literature, scientificism is a great asset.

John E. Wood,  
9 John Street,  
Lynn, Mass.

## Scientificism

THERE is in the American mind a powerful congenial urge to assist each individual in the natural process of self-realization.

It is peculiar to our nation's genius, whether it be in government, in social order, in organized industry, in education, or in pure discovery, to follow, not the line of least resistance, but the line of greatest and sterile speculation, but the line of vital impulse.

And whence does this particular impulse spring, if not from the sense of the real value of knowledge to man as man?

There is no more precious to us than the right of our mind to grow independently in knowledge and power.

To the right and growth of the spirit of intellectual self reliance and fair play of active creative energy, the spread of public intelligence is absolutely necessary.

Nothing is more friendly to popular institutions than education; no education is more valuable than that which gives to the current of imagination; no better medium for the spread of this education with a vision than the type of literature denominated with a zeal as "imaginative."

For Scientificism inculcates more than mere formal adherence to academic principle learned in the schools; it stimulates intuitive belief as well as acquired knowledge; it accords dramatic receptivity into factivity, and the scientific temperament into the prophetic attitude of leadership in discovery.

Nothing has been done by man that has not somehow, somewhere been thought of by some one, no matter in how vague a form. The dreamers of yesterday would today be considered behemoths of knowledge; the actors have become our every day matter of fact; so shall generations to come find practical comfort and assistance in new questions, because of the visions of a few scientificism writers.

Let all the possibilities of the future be as to the comparative emphasis do be laid on the several forms of fiction. The undeniable fact remains that scientificism alone provides that unlimited opportunity for the acquisition of the suit of knowledge which is the pathfinder to the highest service to humankind.

It is therefore no paradox to affirm that the astonishing growth of the scientificism of hopeful expression of the Spirit of America and of the forward look.

Paul Louis Buffa.

# Our Point of View

## Notes on the Work of Various Contributors. The Drawings by Paul

### Editor, AMAZING STORIES QUARTERLY:

In *AMAZING STORIES QUARTERLY*, Winter, 1928-29, there is one story that stands out among the best things you have published since you started the magazine. It is "The Seventh Generation." It is well worked out and splendidly told. One tale like that is worth a hundred like the "Nth Man" and all the giant grasshoppers that ever flew.

"Ralph 1244" is very good indeed and there is little to criticize in it. However, the recreation cities of only about one-third of a mile in diameter cannot hold very many houses, parks, pools, shops in profusion, etc. Looks like a slip. The last horse died June 19, 2096 A. D., and yet one is shown in a circus in 2660 A. D. Voice and written signature is one of the most important things in the story and it may be that there are some on earth right now who will see it in actuality. "Margatroy Experiment" is lame in at least one particular. Excessive reproduction of plant men and women through seed should have been known in advance by means of his experiments with the clover forms of autumn. The study of which he had ample time to utilize.

"The Evolutionary Monstrousity" is just a disgusting, degrading thing. Worse than useless.

If some of those fellows who kick at Paul's illustrations had to do them themselves they would keep mum. While they are not perfect, as I view them, I'd like to see one who could better them.

F. L. Morgan,  
Whitaker, California.

[We again have a letter which speaks for itself. We are certainly glad of your appreciation of Mr. Paul's work, and you certainly spare no words in commendation.—Editor.]

## "Just What Is Romance?"

### Editor, AMAZING STORIES QUARTERLY:

May I sit in the Hallelujah corner for a few minutes? In *AMAZING STORIES QUARTERLY*, 1929 Winter edition, there appears in *Your Viewpoint* section, a Contribution from Reader Who Wants Romance Left Out of Our Stories." Your comment is so much to the point that further remarks may seem superfluous, yet a thought comes to me which I believe might be stressed to advantage.

The question is, "Just What Is Romance?" and through my personal conception of the word, I felt much trepidation when I read this caption. It would seem that anything in the line of "love-story" comes under the heading of "romance." My "Whetstone" in the drawing in the office, so I am not going to enter any argument on that subject, except to say that I do not believe that a story containing romance need necessarily be composed of sentimental sex business. A good love story, pure and simple, is all right, if that is what you want and what you are paying for, but of course as such it has no place, nor have you ever to my knowledge (and I read every issue) incorporated such a story with your pages. But a re-identification yarn, with a good, sane and normal love-theme on which to hang it—that is another story.

Now I get at what I really wish to say: leaving the conventional love-theme out of the picture. Romance of the quaternary degrees which stimulates the imagination of nearly everyone could and should be woven into a yarn that might otherwise be coldly scientific.

It has been my personal observation that mankind craves illusion. Let some people misconstrue my meaning, I will add emphasis to this statement by insisting that I do not mean "deception." When a writer goes to compose a story of any kind he must have first, several handfuls of cold hard facts. More than he is really going to use in his story. Facts do not make a story, all popular ideas to the contrary. He takes a few of these facts, arranges them according to a plan, and then proceeds to dress them up and to clothe these facts with whatever fund of fancy he may possess. Then comes the question. If he has written long and hard and if there is within him "that certain something," which we may recognize as the creative imagination, there will be something in his work, apart from the mechanical planning and the general con-

struction. There will be a glaze and a glamor running throughout the story. It will be saturated with it and the reader will be able to put his finger on any one place and say "This is it." Least of all, neither can the writer tell you how he did it, any more than he can tell you how he learned to ride a bicycle. It is there, all woven in and very unobtrusive, like the hushed down of the water-fall at a distance and you feel it at every turn; illusion rises all around you and you are transported to another planet, you forget your present existence and glory in the adventure you longed for and are sorry when the story is ended. Yet "the melody lingers on." All of this may well be accomplished without a "love-theme"; it really makes no difference and so long as the latter is only incidental and held subordinate to the main issue, I see no reason why folks should not love and marry and raise the dickens in scientificization, just as they do in real life!

### Net Notage.

Walnut Creek, California.

[This letter is so good that comment not only is unnecessary, but is very hard to originate. We are inclined to agree with you. It does not hurt the science to include a little romance in the stories, and it certainly adds a good touch of human nature. So we believe our readers, as a rule, will not object to having their science a little ornamented. In fact, we believe, a poet once said, "Love makes the world go 'round."—Editor.]

## The Breaking Down of Radium. The Atmosphere of Jupiter's Moon

### Editor, AMAZING STORIES QUARTERLY:

Generally speaking, this winter's issue of the *QUARTERLY* is about the best I have yet read, and there were still a few old mistakes such as were found in previous issues.

First, in "Ralph 1244" Mr. Gernsback states that radium obtains its energy from the ether. The atomic weight of radium is 226.95, and that of lead, into which it is supposed to be changing, 207.20. Naturally the radium atoms would have more power of attraction than those of lead. It should be easy to see from these statements, that in order for radium to break down in its lower centers and let its atomic power be released, Naturally that energy would come from the atom, not from the ether.

Now, in regard to the "Margatroy Experiment" by Capt. Meek. The human body needs a certain amount of proteids, mineral matter, vitamins and the various compounds of hydrogen, oxygen and carbon. According to the author's description of a planet man's nutrition, only mineral matter and the above mentioned gases would be sufficient to support the existence of a new compound in the blood might have a serious effect upon our normal adjustment.

It is rather difficult to see how the experiment, in excellent theme, how so far as I can see, he failed to express it properly. Another thing I wish you to know, is that I absolutely agree with Mr. Pierce in regard to the romances that are appearing in your magazine. Not only this, but your authors nearly always write on a single subject. As they seem to have explored about every universe in this atom, so it would do no harm if they would select their scenery elsewhere. Mr. Gernsback's story, despite the romance, was the best in the issue. His prophetic abilities are well shown in his words on Einstein's Latest Theory, also entitled "The Heliometer Experiment," though it comes under similarity's head.

### James Suter,

751 Bergen Ave.,  
Jersey City, N. J.

[We would be very slow to criticize the breaking down of radium, and a moon of Jupiter of adequate size would undoubtedly have its own atmosphere. We as scientists and we as readers are interested enough in the stories to find flaws in them.—Editor.]

## A Criticism of Several of Our Stories from a Young Lady Reader

### Editor, AMAZING STORIES QUARTERLY:

After reading your *AMAZING STORIES* and *AMAZING STORIES QUARTERLY* for some fifteen months, I am now experiencing a desire to write down my opinion of them. The magazines are on the whole, good. Some of the stories are, however, quite the reverse.

For instance, take "The Menace," by Keller. That story (or series of stories) is absolutely out of place in any magazine worth reading, and most of all in a publication that keeps up as consistently high a standard as yours. The style is not good and the conversations, especially, could not be more awkwardly phrased. Then, even worse, it has a theme that is very liable to stimulate race prejudice, which I am sure is not one of your aims in publishing *AMAZING STORIES*. There is no science worthwile of the name in the whole set. And the use of radium to increase the size of the wasps sounds rather far-fetched. Radium is not a "universal solvent." Also, the author does not explain how it happened that the United States was the only nation to use glass so extensively and suffer from insanity. "The Menace" is one of the few stories in your magazine with absolutely no redeeming point.

If science, style, and plot are all considered, "Out of the Sub-Universes," by Starzl, is one of the best that you have printed in the *QUARTERLY*. The only thing that seems too "amazing" is the changing of the size of the people involved. But the theory of the structure of the atom and of the most logical one that has yet been formulated.

"The Second Swarm," by Schlosse, is another good story, falling down mainly, I think, in that it presents a civilization too perfectly organized for too long a period of time. If the thousand year periods had been shortened to centuries and a few defects and imperfections allowed, it would have sounded so much more probable. Truth is sometimes improbable but it is reasonable. And no civilization ever remained stable for even two hundred years.

"The Nth Man" was interesting at all had, but why did the author spoil it all by giving the reader the impression of an allegory and a piece of scientific fiction?

The description in "The Moon of Doom" is wonderful (admon). But it's a good story, a well balanced mixture of science and fiction.

"The Sunken World" was an interesting story but not much else. I have nothing against the science of it. It may be scientifically possible but certainly not humanly possible.

If this letter seems immature and inadequate, I believe I can explain it partly. I'm fifteen years old and have had only two years of science, biology and chemistry.

I'd not like to commit myself as far as is to say that your magazine is the best published, but it is the only one of which I never tire.

Please accept my congratulations for what you have accomplished and my best wishes for the continued prosperity of *AMAZING STORIES*.

Marla Konopnicka,

Portland, Oregon.

[We have always claimed that we publish brick-bats, just as we do complimentary letters, and this certainly contains a specimen of a good brick-bat. I am sure that you, Dr. Keller's articles have been greatly admired. He is a man of much culture and fine ideas, but even the correctness of his science and encouraging words, so we will have to forgive her for her opinion of Dr. Keller's stories, although her opinion does not coincide with that of many of our readers. You need not lose any more possibility in our stories of the future than did Prof. Simon Newcomb, one of the leading astronomers of America, who saw his man's ever flying. He scouted the idea of such a thing and died before its accomplishment. We think it is a pity that we see how a brick-bat in the beginning is followed by commendation, and we can assure our young correspondent that we greatly enjoy her letter and take special pleasure in publishing it as a production of a 15-year-old young lady.—Editor.]

## Imagination and Inventive Progress

NO estimate of the worth of scientific fiction that values it only for its power to fascinatingly entertain does the subject justice. The writing of fantastic stories, imaginatively conceived and developed from accepted theory and fact serves a far deeper purpose.

Within the memory of every man who has passed his 30th birthday the automobile was ridiculed as an impractical toy. The first airplane was greeted with boos of derision. Perhaps not even Jules Verne himself, and certainly not his early readers, dreamed that in the dawn of the 20th century an experience like that which befell the characters in his *Twenty Thousand Leagues Under the Sea* could become a comparative commonplace.

So it has been from ideas no less far-fetched for their time, than those unfolded in present-day scientific fiction that mechanical wonders, miracles of medicine and surgery, marvels of chemistry, have sprung. Vision, always the pioneer in progress, inspired action. To-day, withdrawal from our lives of any one of a score of inventions one pool-poohed as wildly impossible would demoralize the whole structure of civilization.

Thoughtful people, observing these things, have grown less skeptical of new proposals, however radical their departure from the realm of the known and tested. Each year finds minds more open to suggestion; less thinking along traditional lines; more readiness to reach out and grasp rather than reject.

Here, then, is the golden opportunity for scientific fiction: Not to educate in problems already reduced to formulae; not, necessarily, to popularize science, but to stimulate imagination, to feed and foster the already growing conviction that nothing is now unachievable.

Thus, pointing the way to desirable attainments with vivid and thrilling word pictures, scientific fiction becomes the agency through which is enlisted public support of great scientific enterprise. And who can tell to what heights this and succeeding generations may rise with science given the free hand? And this it would surely have with widespread public curiosity and enthusiasm as its ally.

Large funds may be attracted for the endowment of scientific research. In time governments themselves may be persuaded to establish separate Departments of Science whose duty it would be to seek out, relieve it of the restrictions which necessity imposes upon it, and set it to work with all the tools that money and genius can provide, for the benefit of mankind.

Such ends are best served by indirection. Come at a man bluntly with a revolutionary thought and you startle him into an attitude of cautious defense. Capture his fancy and he will do his armor and take his place beside you in the march upon the great.

Only the unimaginative is the dull man. Only to him who is without vision is life flat and colorless. Scientific fiction, skillfully employing the art of imagery and that strongest of devices, suggestion, can open the closed door, expanding our horizons and hastening the day when all the latent possibilities of a richly endowed world will be turned to human usage.

Alan K. Dalby,  
Albuquerque, N. M.

## Notes of Stories in the Quarterly and Monthly Editions of Amazing Stories

Have just finished your Spring QUARTERLY and sure enjoyed "The Nth Man," also "The Second Swarm." I also thought "The King of the Monkey Men" was very good. I have just finished reading the June issue of AMAZING STORIES and am anxious to know more about "The Invisible Man." It is certainly too good to miss. I imagine each can come out about twice a month. Please give us some more stories of "Hicks' Inventions" as they are extremely interesting.

We don't let any one change your magazine, It is just right as it is.

Lewis Griffith,  
506 S. Urbana Ave.,  
Urbana, Ill.

(Personally, we highly approve of "Hicks' Inventions" as we think they are extremely well told and to repeat a quotation, we used some months ago:

"A little nonsense now and then  
Is relished by the wisest men."

This quotation which Bartlett says is anonymous, bids fair to live through the ages and is certainly applied to the hundreds of stories in a magazine which is designed to appeal to a thinking class of readers.—EDITOR)

## The Laws of Generation

Editor, AMAZING STORIES QUARTERLY:

Scientific stories, we are told, should contain from 5 to 25 percent Science, which implies knowledge. I believe most readers of AMAZING STORIES are fairly intelligent persons with a slight store of knowledge of their own; these note some of the scientific mistakes in the stories and thus the tales lose much of their interest for them. Also there is another angle: these stories are supposed to be "sugar coated pills of science" and a wrong statement may do harm. For these and other reasons the worth of Scientific depends not so much upon the quantity, but the quality of science in it. For instance the "Gravity King" contains a minor mistake (if not a blunder) of Science, and no errors, and it is a fairly good story in spite of the agelessness of the plot. On the other hand the Doctor, being a doctor, should know better. (But on page 524 he does follow Larmar, though DeVries and Mendel et al. have shown his error.) He plays with a popular myth and so contrives to prolong its life. I wonder: has he never heard of Pictorial Island. I believe the latest account of it was in a recent issue of *Popular Science Monthly*. So the "Scientific" must have been present from the first. Now we have 10,000 persons, or 5000 couples; if only half of these produced acceptable offspring there would be 2500 couples to start with. Now how much in-breeding would there be in—let's see, 10 into 200—that's 20 generations. And even supposing so, all that (constant) stock would be epilepsies. And if (as most evidence seems to show) it is a simple recessive, how come most all the F20 (20th filial or descended) generation short it and none before. Now, even this should be published I'll give a suggestion of the basis of my criticism:

In each "sex" and each male cell is a double set of "chromosomes" which probably govern all of the life's evidence points to be divided into "genes," each of which furnishes one unit. A one-unit trait is called "simple," but sometimes two or more are combined in a trait or trait called "complex." But only one-half of each chromosome is passed on—and not always the same half. So we may have a trait DD (dominant) and its opposite trait RR (recessive). Say D is normal and R is epilepsy. When these are crossed (DD x RR) one D and one R are combined in each child (DR). The R is shown, namely to show that it is recessive, that is, it doesn't appear. The D is dominant, it dominates the r and the perennates normally. But combine the r and D and by the laws of chance, out of many children about one in four will be DD, about one-half (2 in 4) will be DR, and the rest (about one in four) will be RR. So by the laws of chance the epilepsy would show earlier or else affect but few. For popular legend to the contrary, "inbreeding" does not concentrate bad genes, but does not create new ones. Only a mutation, commonly called a "sport" or "break of nature" can do that.

Yes and verify "Don Allico" should not consider a rodent Placental and a radio-rodent Marsupial. An egg-laying Marsupial is not probable and might survive in such a place, but to call it a connection between the hares and kangaroos is an insult to the taste of a generalized scientist, the hero was supposed to represent. Had he been represented as a specialist, this and other mistakes would have been true so that the 50 mile-per-hour insects remember that while "up to a certain limit it (size) results in increased speed," yet "the strength increases as the cross-section of the muscles, that is the square of their diameter whereas the weight increases as the bulk, that is as the cube of the diameter. Hence every insect must double the dimensions of its body to have its proportional strength." The large insects known to have ever lived had a two-fold wingspread. That was a dragon-fly about 300 million years ago. Nature gave insects slowly. They might be bred faster by artificial means, but not as fast as the agricultural ants and the "Volcanic" and "Giant" could be the same mother. It is a case of individual response to environment—in this case food.

Why not put true Science in Scientific?

Clifton Ambury,  
2216 Ward Street,  
Berkley, Calif.

(We want to let this letter speak for itself. The principal thing we would say about it, that we are glad that our stories are of such character as to elicit such elaborate criticisms. We certainly appreciate the thought you have given to our pages. We hope that "generalized scientists" will feel that this sort of criticism suits to them. We are sure the author will take great enjoyment in reading your most interesting communication. However, there is one remark we must make, which is that science is advancing changing from day to day. It should not be so positive in your points of view.—EDITOR)

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See notice elsewhere in this magazine for special list of this month's contents.

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### An Indefatigable Reader

Editor, AMAZING STORIES QUARTERLY,

Once upon a time, my father said: "Why on earth do you read such trash?" A few days ago, I found him deeply interested in "A Modern Atlantis" which was published in the Spring issue of the *QUARTERLY*. Perhaps that was modern enough for him. As yet, he refuses to read any of the more imaginative classics, but I am doing my duty and some day I may add another name to the list of your readers. I am proud to say I have read every discussion, every story and editorial in every issue of *AMAZING STORIES* since it was first published. This includes all *ANNUALS* and *QUARTERLIES*. Being a college student I shouldn't have time, but I always manage it. As for criticism, I will only say, "I can say no more." I would appreciate occasional story by Verne or Wells or other old writers, but as I have read most of them some years ago, a little of a good thing is enough. I congratulate you on the good work you have accomplished so far and I hope you increase the output to 300,000.

By the way, I liked the Spring *QUARTERLY* best; perhaps because all the stories were new.

Robert W. Conant,

204 Ryland Street,

Reno, Nevada.

(The imagination is a distinct feature of the mind and being implanted therein, should have nourishment. If imaginative literature was discarded, we would lose the poets and great novelists and a vast amount of the best literature of the world. Wells, the most discussed, is a present day author and has an active pen. You are certainly entitled to the qualifications of "an indefatigable reader."—EDITOR.)

### Criticism from a Navy Reader

Editor, AMAZING STORIES QUARTERLY,

My first copy of *AMAZING STORIES* was a fine one. I was then serving on board the U. S. Sub-S-32 at Manila, P. I. Since that time I have never missed an issue.

The *QUARTERLY* is a great idea and it just fills in, for I finish the monthly in two evenings and then worry the newsstand keeper for twenty-eight days, "Are they in yet?"

Bell's "Moon of Doom" was a story; also "When the Sleeper Wakes" was fair, but stories like Brenner's "Puzzle Duel" are so common, that almost every day a person may read of somebody being electrocuted by a horse striking a wire; as for poisoning, that's an every-day occurrence in Los Angeles, 13 miles from here.

But give me more like the "Moon of Doom," something that will happen in the future, not every day occurrences; here's more power to you."

Eu. Burningham,

2589 Morningside

Pasadena, Calif.

(We wonder if you took *AMAZING STORIES* under the water with you when you were serving on a submarine. Your breezy criticism is quite de- lightful. Your information about Los Angeles seems rather startling. We never knew it was as bad as that in that city. But your ver- criticism of Brenner's "The Puzzle Duel," we took as a compliment, because it goes to show that the story was not an impossibility.—EDITOR.)

### "Into the Green Prism"

Editor, AMAZING STORIES QUARTERLY:

For some time I have been one of the great army of silent readers of your pioneer maga- zine. The only reason I have for stepping out of the role is that in reading A. Hyatt Ver- rill's latest story, "Into the Green Prism," I came upon two minor flaws, of which, an ex- planation may be of benefit to some of your readers.

Re the golden beads, Mr. Verrill seems to think that no such microscopic work has been done in modern times. Does he know that the Lord's Prayer has been inscribed on the head of a pin?

Further on, Mr. Verrill, through his char- acter of Prof. Anador, makes the following statement: "We can analyze diamonds, granite, mica, etc., but we cannot make identical sub- stances artificially."

In 1903 H. Moissan, Prof. of Chemistry in the University of Paris, succeeded in making small diamonds. Readers who are interested may find an account of the experiment in many books on chemistry and mineralogy.

In spite of the two corrections, I think that Mr. Verrill's story promises to be the best I have ever read.

Donald G. Allen,

110 Eastern Parkway,

Brooklyn, N. Y.

(Carving ornamental designs upon minute gold beads is far different from doing pan- tograph work on the head of a pin, so your criti- cism hardly applies. Prof. Moissan's diamonds were very minute, and it is fair to say that diamonds cannot be made artificially to any extent and certainly one of any size could not be made artificially. All we can do is to thank you for your appreciation of what we consider a very beautiful story by Mr. Verrill. —Editor.)



# AMAZING STORIES

## Monthly

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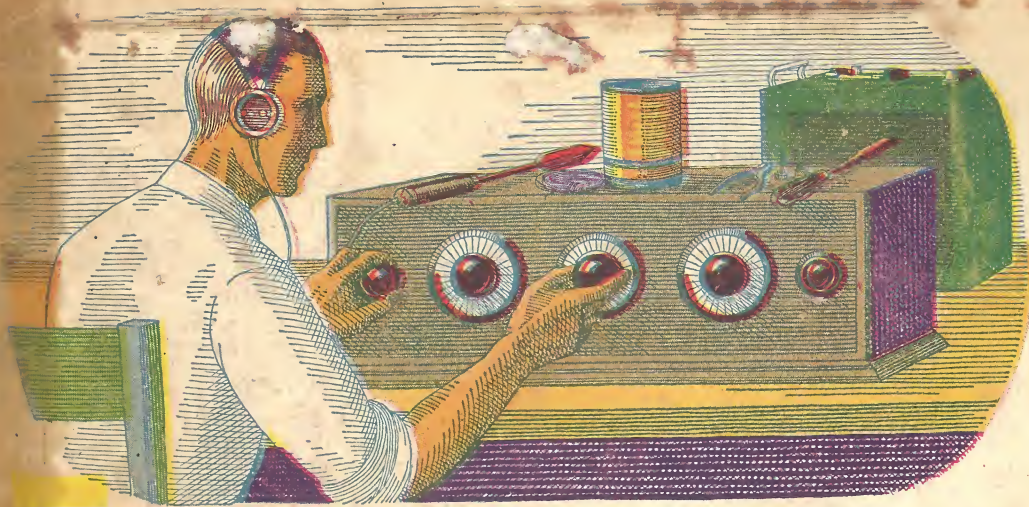
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If all the Radio sets I've "fooled" with in my time were piled on top of each other, they'd reach about half-way to Mars. The trouble with me was that I thought I knew so much about Radio that I didn't know the first thing I thought Radio was a plaything—that was all I could see in it for me.

# I Thought Radio Was a Plaything But Now My Eyes Are Opened, And I'm Making Over \$100 a Week!

**FIFTY DOLLARS A WEEK!** Man alive, just one year ago a salary that big would have been the height of my ambition.

Twelve months ago I was scrimping along on starvation wages, just barely making both ends meet. It was the same old story—a little job, a salary just as small as the job—while I myself had been dragging along in the rut so long I couldn't see over the sides.

If you'd told me a year ago that in twelve months' time I would be making \$100 and more every week in the Radio business—whew! I know I'd have thought you were crazy. But that's the sort of money I'm pulling down right now—and in the future I expect even more. Why, only today—

But I'm getting ahead of my story. I was hard up a year ago because I was kidding myself, that's all—not because I had to be. I could have been holding then the same sort of job I'm holding now, if I'd only been wise to myself. If you've fooled around with Radio, but never thought of it as a serious business, maybe you're in just the same boat I was. If so, you'll want to read how my eyes were opened for me.

**WHEN** broadcasting first became the rage, several years ago, I first began my dabbling with the new art of Radio. I was "nuts" about the subject, like many thousands of other fellows all over the country. And no wonder! There's a fascination—something that grabs hold of a fellow—about twirling a little knob and suddenly listening to a voice speaking a thousand miles away! Twirling it a little more and listening to the mysterious dots and dashes of steamers far at sea. Even today I get a thrill from this strange force. In those days, many times I stayed up almost the whole night trying for DX. Many times I missed supper because I couldn't be dragged away from the latest circuit I was trying out.

I never seemed to get very far with it, though. I used to read the Radio magazines and occasionally a Radio book, but I never understood the subject very clearly, and lots of things I didn't see through at all.

So, up to a year ago I was just a dabbler—I thought I was doing something. I never realized I was missing a big, fast-

growing industry Radio had come to be—employing thousands and thousands of trained men. I usually stayed home in the evenings after work, because I didn't make enough money to go out very much. And generally during the evening I'd tinker a little with Radio—a set of my own or some friend's. I even made a little spare change this way, which helped a lot, but I didn't know enough to go very far with such work.

And as for the idea that a splendid Radio job might be mine, if I made a little effort to prepare for it—such an idea never entered my mind. When a friend suggested it to me one year ago, I laughed at him.

"You're kidding me," I said.  
"I'm not," he replied. "Take a look at this ad."

**H**E pointed to a page ad in a magazine, an advertisement I'd seen many times, but just passed up without thinking, never dreaming it applied to me. This time I read the ad carefully. It told of many big opportunities for trained men to succeed in the great new Radio field. With the advertisement was a coupon offering a big free book full of information. I sent the coupon in, and in a few days received a handsome 64-page book, printed in two colors, telling all about the opportunities in the Radio field, and how a man can prepare quickly and easily at home to take advantage of these opportunities. Well, it was a revelation to me. I read the book carefully, and when I finished it I made my decision.

What's happened in the twelve months since that day, as I've already told you, seems almost like a dream to me now. For ten of those twelve months, I've had a Radio business of my own. At first, of course, I started it as a little proposition on the side, under the guidance of the National Radio Institute, the outfit that gave me my Radio training. It wasn't long before I was getting so much to do in the Radio line that I quit my measly little clerical job and devoted my full time to my Radio business.

**SINCE** that time I've gone right on up, always under the watchful guidance of my friends at the National Radio Institute. They would have given me just as much help, too, if I had wanted to follow some other line of Radio besides building my own retail business—such as broadcasting,

manufacturing, experimenting, sea operating, or any one of the score of lines I prepare you for. And to think that on that day I sent for their eye-opening book I'd been wailing "I never had a chance!"

**N**OW I'm making, as I told you before, over \$100 a week. And I know the future holds even more, for Radio is one of the most progressive, fastest-growing businesses in the world today. And work that I like—work a man can be interested in.

Here's a real tip. You may not be as bad off as I was. But think it over—do you feel satisfied? Are you making enough money, at work that you like? Would you sign a contract to stay where you are for the next ten years—making the same money? If not, you'd better be doing something about it instead of drifting.

This new Radio game is a live-wire full of golden rewards. The work in any of the 20 different lines of Radio is fascinating, absorbing, well paid. The National Radio Institute—oldest and largest Radio home-study school in the world—will train you inexpensively in your own home, know Radio from A to Z and to increase your earnings in the Radio field.

**TAKE** another tip—no matter what your plans are, no matter how much or how little you know about Radio—clip the coupon below and look their free book over. It is filled with interesting facts, figures, and photos, and the information it will give you is worth a few minutes of anybody's time. You will place yourself under no obligation—the book is free, and is given sent to anyone who wants to know all about Radio. Just address J. E. Smith, President, National Radio Institute, Dept. 9Q3, Washington, D. C.

J. E. SMITH, President  
National Radio Institute  
Dept. 9Q3, Washington, D. C.  
Dear Mr. Smith:

Please send me your 64-page free book printed in two colors, giving all information about the opportunities in Radio and how I can learn quickly and easily at home to take advantage of them. I understand this request places me under no obligation, and that no salesman will call on me.

Name .....  
Address .....  
City ..... State .....  
Occupation .....